Clinical Lecture
ON
A CASE OF ASCITES FROM OBSTRUCTION IN THE PORTAL VEIN.

Delivered in University College Hospital,

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TO-DAY, gentlemen, I propose to speak of the case of Robert A——, a man who was in the hospital recently, and whose abdomen burst. You may remember that it gave way at the umbilicus with a loud report, and a quantity of fluid came out. He had ascites, and also a considerable amount of gas in his peritoneum. You know quite well, when an abdomen is resonant on percussion, and you find the resonance—i. e., the air within the abdomen—move as you move the patient, that, as a rule, the gas is not in the peritoneum, but in the intestines. In this case, however, the gas was in the peritoneal cavity itself. That is why there was a report when the abdominal wall gave way. The man had had an artificial opening made in his belly—as I shall tell you afterwards—for the purpose of letting out the fluid. It had healed but imperfectly, and, when the gas rapidly accumulated, the weak spot ruptured.

The real causes of the man's troubles were an impediment to the flow of blood through the portal vein, and an impediment to the escape of bile from the hepatic duct. To these two lesions all the others which I shall describe to you were secondary.

Whatever permanently impedes the flow of blood through the portal vein must have, as its necessary result, one or more of the mechanical consequences of congestion of the part the blood from which is poured into the portal vein. The blood cannot easily escape from the portal vein; and, of course, all the tributaries of the portal vein are swollen. The consequence is, that when there is impediment to the passage of blood through the portal vein, there is enlargement of the organs, the blood from which passes into the portal vein—as the spleen and the pancreas. The same impediment to the onward flow of the blood may also cause rupture of vessels. The over-distended capillaries burst, and extravasations of blood and hæmorrhages occur. Common seats of hæmorrhage from this cause are the stomach and the rectum—bleeding piles, hæmatemesis. This man, whose trouble I told you was the impediment to the flow of blood through the portal vein, had repeated attacks of hæmatemesis. Then patients suffering from obstruction to the flow of blood through the portal vein have effusions of serosity from the congested vessels. There is effusion of serum into the cavity of the peritoneum—ascites. This man had ascites. Again, they have "watery fluxes," as they are termed—watery flow from the congested mucous membrane. The mucous membrane of the bowels often suffers from this when it is mechanically congested. The patients have watery diarrhœa. Then thickening of all the congested textures takes place. The coats of the stomach become thickened; the peritoneum becomes thickened; the coats of the intestines become thickened. Again, inflammation, acute or chronic, is very apt to supervene in the congested part. It does not occur constantly, but frequently; so that when there is impediment to the flow of blood through the portal vein it is common to have catarrhal inflammation of the stomach, catarrhal inflammation of the bowels, peritonitis. These are common consequences. Again, ulceration of the congested surface may take place, ulceration of the mucous membrane of the bowels, of the stomach, of the rectum, of all the congested parts. This man had ulceration of the bowel and of the adhesions that had formed in his peritoneum. Then induration of all the textures occurs. Adhesions form between parts that should be free, especially in the peritoneum. Adhesion takes place between the coils of intestine, between the omentum and the intestines, between the intestines, perhaps, and the parietal peritoneum (as we saw in a case the other day), between the liver and the diaphragm, the spleen and the diaphragm, the stomach and the adjacent parts.

As the rule, when there is a *sudden* impediment to the flow through the portal vein, hæmorrhage occurs. When the impediment is more slowly developed serous effusions occur. When hæmatemesis takes place, it generally relieves greatly and at once the congested organs. You find a man's spleen big to-day; he has hæmatemesis, and to-morrow his spleen is greatly diminished in size; its over-distended vessels are emptied, its thickened tissues only remain. You know the close vascular relations between the spleen and the vasa brevia of the stomach.

When I said that some one or more of these results necessarily follow the occurrence of obstruction, I said what was not quite true. I said it intentionally, however; because I wish to fix it in your minds. It is not really *necessary*; but it occurs in the vast majority of cases, in such a large majority that I would fix it in your minds as *the* consequence. It is not the necessary consequence, because a collateral circulation sufficient to relieve the congested vessels may be established. You will remember that there are anastomoses between the inferior mesenteric veins and the hypogastric veins through the inferior hæmorrhoidal, and so the blood may come back by the hypogastric vein. Again, the twigs of the portal vein and the veins of the serous covering of the liver open into the diaphragmatic and œsophageal veins, and these little communications may become considerably dilated. Again, adhesions may form between the liver and the diaphragm; new vessels be developed in those adhesions, and these new vessels may be sufficient to considerably relieve the congested portal vein. They open into the diaphragmatic and œsophageal veins. Again, the remains of the umbilical vein which runs in the ligamentum teres sometimes remain patent. When the portal vein is stopped the remains of the umbilical vein becomes dilated, and this little channel grows into a big vein, communicates with the mammary veins, and so returns the blood on the surface, and you see the greatly dilated veins there carrying up the blood. You will remember, therefore, when you meet with a case in which you believe that there is disease of the liver causing mechanical impediment to the flow through the portal vein, but in which you do not get the ordinary consequences, what I have spoken of as the necessary consequences, those which you would get in the vast majority of cases—remember, I say, that you may be right in your diagnosis, although you have not the ascites, the diarrhœa, the hæmorrhoids, or the big spleen, because some of the veins of which I have spoken may be performing the extra duty of carrying off the blood from the parts which would otherwise be greatly congested.

Whatever impedes the flow of bile through the hepatic duct or through the ductus communis choledochus must impede the escape of bile from the liver; and whatever prevents the escape of bile from the liver will have jaundice following it, and all the consequences of jaundice.

We find that persons who are the subjects of the impediment to the circulation I have described not only suffer from the mechanical consequences of the impediment, such as the ascites and the hæmatemesis, which are common, and the ulceration of the bowels, which is rare, but they also suffer from defective general nutrition. This man was greatly emaciated. What is the cause of this general malnutrition? First, there is the damage mechanically inflicted on the mucous membrane of the stomach and bowels, and the consequent interference with the digestive process. There is diminished absorption from that cause. Then the mechanically over-distended radicles of the portal vein will be very unlikely to take up anything further. Again, there is the damage to the spleen and pancreas from their long-continued congestion, and the consequent interference with their functions. Again, there is damage to all the organs of the body from the damaged state of the blood consequent on these lesions and on the retained bile. These causes seem amply sufficient to account for the emaciation of the patient. Further, as I told you before, when the abdomen is greatly distended there is sufficient pressure upon the vena cava to interfere with the return of blood from the kidney; there is congestion of the kidney, and then, if the patient survives long enough, a form of Bright's disease and all its consequences.

Impediment to the passage of blood through the portal vein, and of bile through its ducts, is common enough—amongst the commonest diseases; because disease of the liver which has these results is common. But impediment to the flow of blood through the portal vein, and to the escape of bile from the hepatic duct from some condition external to the liver, is rare. It does occur, however. For example, malignant growths or hydatid cysts may press upon the portal vein and the ductus communis choledochus outside the liver. Dr. Stokes has detailed a case of aneurism of the hepatic artery, where it runs, together with the portal vein, in the border of the hepatico-duodenal fold, just above the opening of the foramen of Winslow, and which interfered with the flow of blood through the portal vein.

In the case I am about to narrate to you the impediment was the result of inflammation, induration, and contraction of the cellular tissue of the ligamentum hepatico-duodenale and the cellular tissue in the hilus of the liver—i. e., of the cellular tissue in which the portal vein, and the hepatic, cystic, and common bile-ducts lie. It was the trunk of the portal vein and the trunks of the bile-ducts which were injured and narrowed.

The patient was a man forty years of age, admitted into the hospital on the 9th of February, 1869. As the patient was confused in mind, and could only be made to answer questions with difficulty, the following history was obtained from his sister.

"At about the age of eighteen he enlisted as a soldier and went to India. He remained in India for twelve years, and returned to England about ten years since. While in India he was frequently in the hospital, as his sister had been told, on account of disease of the liver and spleen. He was a man of intemperate habits, indulging from time to time in 'drinking bouts.'" This is the common cause of cirrhosis of the liver. It is not the only cause, but it is *the* cause, the special cause, to which exceptions are infinitely rare. You will find it mentioned in books, that when making a diagnosis of a case of impediment to the flow through the portal vein, when considering whether it be from cirrhosis, which has that as its great symptom, or whether it be due to some impediment external to the liver, if the patient be a drunkard it is probable that the case is one of cirrhosis. This man was a drunkard, and there was impediment to the flow of blood through the portal vein, but he was not suffering from cirrhosis.

"About six years before admission into the hospital, after one of these debauches of drinking, he vomited a large quantity of blood." So that at that time he had probably—pretty certainly, indeed—impediment to the flow of blood through his portal vein, mechanically induced congestion of his stomach, and as a consequence rupture of the capillaries and hæmatemesis. "The hæmatemesis was repeated on four separate occasions, the last being about twelve months before his admission." No doubt he was relieved by the hæmatemesis. The congestion of the radicles of his portal vein would be relieved by the escape of blood. The loss of blood was not enough to kill him, but merely enough to relieve considerably the congestion of his spleen and of all the radicles of the portal vein.

"After the last attack of hæmatemesis, twelve months ago, the swelling of the abdomen, which had been transient before, became permanent." The transient swellings of his abdomen were probably due to flatulence. The patient had congestion of his stomach and of his bowels, thickening of all the abominal tissues, interference with digestion, and accumulations of flatus. After the last attack of hæmatemesis the mechanically over-distended vessels relieved themselves by letting out serosity into the cavity of the peritoneum, and permanent swelling, dropsy, ascites was produced. This increased so much that "six months before his admission he was tapped just below the umbilicus, and five and a half gallons of fluid removed." The opening into the abdomen was made a great deal too near the umbilicus. A little ulceration resulted on the inner side of the opening, and obliteration of the umbilical depression ensued. It was a spot where the abdominal walls were weak, and so, when the fluid reaccumulated, the abdominal wall was distended at this spot; a very thin layer of skin covered the fluid beneath, and the skin itself ultimately gave way. He was tapped where he ought not to have been; he should have been tapped lower down, some inches below the umbilicus, a little nearer to the umbilicus than to the symphysis pubis.

"The fluid soon reaccumulated," as it was likely to do. There was a mechanical impediment to the flow of blood through the portal vein; the effusion of serum was the mechanical result; and removing the fluid did not remove the impediment. "Five weeks after the tapping he was nearly as large as he was before the operation; subsequently the distension diminished a little. Five weeks before he came under observation he had a 'fit of drinking' (as his sister called it), which lasted two days. Three days before admission he was seized, 'after tea,' with severe pain in the lower part of the right side of the abdomen. The pain was less after taking some pills; but, as he continued very ill, he was brought to the hospital."

The severe pain in the lower part of his abdomen was, no doubt, the result of perforation of his intestines, which we shall see he had. You will remember that perforation of the intestine is usually announced by sudden severe pain—not always, for now and then pain is absent. All persons of much experience have met with cases where, curiously enough, perforation occurs, I do not know why, without any pain at all. The patient is not aware of having suffered any lesion. The rule, however, is that there is intense sudden pain, with symptoms of collapse, followed by those of peritonitis. The pills given were probably some opiates to relieve the pain.

On the man's admission into the hospital we noted that he was very thin, that his general nutrition was seriously interfered with. His skin was a dirty, slightly greenish-yellow colour. The greenish tint is the tint of long-continued mechanical impediment to the escape of bile from the liver. Hence it is a common tint in cancer of the liver. A person has a gall-stone, and a sudden attack of jaundice; the colour is a deep yellow, with no greenish tint in it. But if he has a chronic jaundice, long-continued, his skin has the greenish colour. The veins on the man's hands &c. were small; evidently there was no impediment to the return of blood from the systemic venous system. They were pinkish, from anæmia. The pinkish colour of the vein is evidence of a deficiency in the red corpuscles, probably the result in this man of the interference with the nutrition in general, and perhaps also of the interference with the function of the spleen in particular.

"His abdomen was considerably distended with fluid. The umbilicus also was much distended. No scar could be seen between the umbilicus and the pubes." The fact was that the perforation had been made at the umbilicus. "During the night, at the lower part of the distended umbilicus, the skin gave way with a loud noise." It would not have been a report had there been no air there. "A large quantity, supposed to be about five pints, of stinking fluid escaped. A drainage-tube was introduced, and a weak solution of carbolic acid injected. The next day (Feb. 10th) fluid continued to escape from the opening. It was very offensive, and gas escaped with the fluid." We had a full explanation of this afterwards, for we found an opening in his bowel; but remember that all collections of fluid in the vicinity of the bowel are apt to become a little offensive. "The abdomen was very tender. Pulse 108, very weak. Urine dark-coloured, containing one-eighth albumen. The man gradually sank, and died on the 11th at 6 P.M."

There was nothing to be done for him; his mind was gone; his pulse excessively feeble; there was evidence of some injury to his bowel, of a long-continued impediment to the flow of blood through the portal vein, and of bile through the bile-ducts.

After death the cavity of the abdomen contained about two pints of an opaque fluid. The external opening of the umbilicus communicated with the cavity of the abdomen. The liver, stomach, omentum, and intestines were matted together and covered with a thick layer of lymph, so hard and vascular that it must have been of long standing. There were no adhesions between the parietal peritoneum and the intestines and omentum, probably because the man had effusion of serum sufficient to separate the parietal peritoneum from the other parts before adhesions formed. The parietal peritoneum was greatly thickened and reddened, and was evidently the seat of long-continued inflammatory action. The peritoneal coat of the stomach was covered with lymph and thickened, and was the seat of numerous ulcers. The lymph had

organised, had become part of the anterior wall of the stomach, and then the seat of ulceration. The posterior part of the bladder was adherent to the sigmoid flexure and the rectum, so that there was no cul-de-sac between the bladder and the rectum. The liver was inseparably united to the diaphragm; its lower edge was above the margin of the thorax.

On separating the adhesions between two of the coils of the small intestine, situated in the right iliac fossa (where the man had felt severe pain during life), an opening was exposed, about the size of a sixpence, out of which fæcal matter escaped. In the interior of the bowel, a large ulcer was found at the spot. The mucous membrane around was intensely red, and coated with dirty-yellowish lymph. The situation of the ulcer was in the ileum, about a yard and a half from the cæcum. The peritoneum over the ulcer was destroyed to an extent greater than that of the opening itself, so that the muscular fibres were laid bare as well from the peritoneal as from the mucous coat. As we looked at it *in situ* we thought that the opening might have been made from the peritoneum into the bowel. This is rare, but we thought it possible. On opening the bowel, however, it was clearly not so, for here the mucous membrane was considerably destroyed; it was destroyed over an area larger than the opening, and larger even than the destruction of the peritoneum. Thus there had been ulceration of the outer side and ulceration of the inner side, but from the congestion of the mucous membrane around, we knew that the perforation had occurred, as it usually does, from within outwards. Several small ulcers were subsequently found in the intestine which had not perforated, but only destroyed the mucous membrane. Thus it was clear that the ulceration had began in the bowel. It was the result of the mechanical congestion of the bowel. I told you that inflammation of the mucous membrane of the bowel resulted from the mechanical congestion, but that it was catarrhal inflammation. As a consequence of this, deeper-seated inflammation with ulceration may occur, and here we had it so deep that it had perforated the bowel. The mucous membrane around the ulcers was of a deep mahogany colour.

The capsule of the liver was thickened, and the liver itself was too granular, but not contracted; the edge was thick and the tissue broke down easily under pressure. Evidently, although it was not a healthy liver, there was no such disease of the liver-substance as to seriously impede the flow of blood through it. It was not an ordinary cirrhosed liver. The gall-bladder was covered with old lymph, and its coats were thickened; it contained four gall-stones, and scarcely any bile. The cystic duct was completely closed, and the hepatic duct and the branches of the portal vein and the common duct, all the parts in the hilus of the liver, were bound together by old adhesions and a large increase of the connective tissue. This was plainly the centre of the trouble. Here the lymph was the toughest and it was evidently the oldest. Here it was the most perfectly organised, but still greatly contracted, compressing the portal vein, compressing the cystic duct, compressing the ductus communis choledochus. All the branches of the portal vein had their coats greatly thickened, and in one branch—that to the right lobe—was an old clot firmly adherent.

There were four gall-stones in the gall-bladder, but we had good reason to believe that they were not all the gall-stones that had been there. I say, "not all," because their sides were flattened, and they were small gall-stones, and they did not seem to form the whole mass indicated by the peculiar flattening. We thought it probable, from the history of the man, from his having been several times in hospital with something wrong with his liver, that he had had gall-stones before, gall-stones passing down his cystic duct, or his ductus communis choledochus, which had led to inflammation, perhaps to ulceration, and to injury of the parts around. We know that such inflammation and ulceration do sometimes result from the passage of a gall-stone, and that now and then a gall-stone is thrown out by the ulceration into the parts around. We had no evidence here that ulceration had proceeded so far, but we had evidence of inflammation which had become chronic, and had ended in exudation of lymph, the man's habits and the climate he had lived in also perhaps assisting. Lymph thus exuded contracts, and an impediment is established to the flow of blood through the portal vein. Thus, I think that the origin of the patient's trouble, the origin of the inflammation in this particular situation, where it had such a damaging effect upon his health, was the passage of a gall-stone. The liver itself was really scarcely diseased. It contained a good deal of bile from the damming back of bile into it, but the ducts were scarcely, if at all, dilated, and the cellular tissue between the lobules was a little increased. The obstruction to the flow of portal blood to the liver had, no doubt, diminished the formation of bile, and hence the absence of dilatation of the ducts in the liver. The weight of the liver was 3 lb. 7 oz.

The spleen was large and tough, the capsule thickened and adherent; it weighed 1 lb. 10 oz. This was no doubt the result of the mechanically produced congestion. The mesentery was greatly thickened, coated with lymph such as covered the omentum; this lymph was due probably to the same cause which had led to the thickening of the intestines, to the enlargement of the spleen,—i.e., the mechanical congestion, and the inflammation secondary thereto. The kidneys were enlarged; the right weighed 6 oz., the left 7 oz. The cortical substance was broad and a little speckled with red. Probably the mechanical congestion of the kidneys, assisted by the habits of the man, had given rise to inflammation, and in his cachectic condition to that low form of inflammatory action which is followed by the exudation of a great quantity of protein granules which quickly experience fatty degeneration.

We thus see, pretty clearly, considering how little history of the man we had, the course of his disease from its commencement to his death, and how the one disease, the one condition, followed mechanically upon the other; how the enlargement of his spleen, the vomiting of blood, the effusion into his peritoneum, the ulceration of his intestine, the perforation of his intestine, the distension of his belly, and the bursting of his umbilicus,—how all these were the mechanical results of the primary disease, the inflammation of the cellular tissue about the portal vein and the hepatic, cystic, and common bile ducts. The further result of this was changed nutrition, for he was very thin, and evidently his nutrition was interfered with by the damage to the abdominal tissues and organs, consequent on their mechanical congestion, and on the damming back of bile in the blood itself.

Remarks
ON THE
METHOD OF REMOVING GROWTHS, ETC., BY THE ELASTIC LIGATURE.

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I HAVE been asked by so many persons to state anything I may chance to know relative to this subject, that it seems necessary to comply briefly with the suggestion. I confess, however, I would much rather have waited for a larger personal experience than the observation of a few cases at Vienna and the management of one case here can afford me. But as in making experiments—and no doubt many of my brethren will be inclined to try the plan—it is certainly desirable to be first provided with a hint or two relative to the procedure, I see no objection to writing a few lines for the purpose.

Of the woman whose right breast I removed by means of the india-rubber ligature, I may say that she has made an excellent recovery. The progress of the case was unsatisfactory at first, owing to two circumstances. The first was an attack of erysipelas, prolonged rather than severe, which appeared two or three days after the application of the ligature, and which affected the right arm, shoulder, and most of the back.

Erysipelas has been very prevalent of late. Thus, I operated by lateral lithotomy this day fortnight on a man in the hospital, aged seventy-three years, who has been attacked by it in the perineum, buttock, and scrotum, but who is nevertheless doing admirably well, and will soon recover. So that I see no reason to suppose that any special liability to erysipelas arises from the peculiar nature of the operation on the breast.

The second unfavourable circumstance is that, being my first case, the elastic thread was not tied tightly enough, as I now think. In fact, I was afraid of snapping it at the time of the operation.

At the end of eight or ten days the ligature was evidently not embracing the still undivided portion so firmly as it ought to have done. I therefore made it tighter, which was very easily done by pulling out the loop from the wound as far as possible without much hurting the patient, and tying round it a fine ligature, so as to diminish, perhaps by one-half, the encircling noose. Certainly the mass was larger than I at first suspected it to be; and it is not to be overlooked that the whole breast was of course extirpated.

The cord on one side gave way about the second day; I therefore did not reapply it until after the other half of the breast had been divided; and on this occasion the process was more rapid, and no more erysipelas appeared as the result of the fresh pressure from the ligature on the skin. The whole mass was removed about ten or twelve days since, and nothing can be better than the appearance of the wound now, which began to diminish rapidly after the tumour came away.

I am satisfied that the fine india-rubber tube which I used, and which was the only material then attainable, was not sufficiently strong. I have therefore had some *solid* cord manufactured for me, which is much more powerful, and which I believe will divide the tissues in at least one-half the time which was occupied in this case by the tube. Its superiority is very manifest, for, being much stronger, it may be drawn at least twice as tight as the tube, and the consequence is that not only is the tension on the tumour greater, but the cord itself by the same process becomes finer, and therefore cuts more rapidly. In fact, there is no comparison between the two.

A small quantity of this cord could not be made, as no such product is required for any other purpose, and I have, therefore, deposited the whole with Messrs. Weiss and Son, from whom it can be obtained.

I also think it must be better, as Prof. Dittel now does, to apply the ligature to one-half of the breast at a time, the lower side, and not to use the second for the upper half until the first has separated. This was what actually did occur in my case, only the upper ligature, having remained some thirty-six hours or so before giving way, strangled the whole mass, and produced a far more offensive result than would have occurred had only one been at first employed.

No doubt the principal objection to the plan is the smell which necessarily arises from the sphacelated portion. This was much controlled by constant irrigation with carbolic acid and water, from a bottle placed above the level of the patient's head; a small current flowing through a tube, the lower extremity of which rested on the breast as the patient lay in bed, the part being isolated by means of a macintosh cloth, and the solution running into a receptacle below. All this was admirably arranged and attended to by the house-surgeon, Mr. Buckston Browne.

No doubt a breast is a rather severe test for the ligature, although I do not hesitate to anticipate a very much better result with a more powerful cord. For the removal of the testicle, and for division of fistula in ano, I think it will be found admirable.

The cord itself ought to be more accurately described. Its size before use is the following: [redacted] When applied it should be strained until it is a mere thread—say like this: [redacted]

It would be very easy to devise a simple apparatus to tighten it subsequently, but it is so easy to accomplish this by pulling it out if loose, and tying a bit of fine ligature round the portion so drawn out, that it seems unnecessary to employ any other means. But with the new cord it is very probable that no such readjustment will be required.

Wimpole-street

THE

TEACHING AND PRACTICE OF PSYCHOLOGICAL MEDICINE AS INFLUENCED BY CLASSIFICATIONS OF INSANITY.

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ALL who know what services Dr. J. C. Bucknill has rendered to his department of practice would read with interest his "new classification of insanity" (THE LANCET, Nov. 15th, 1873). Nothing is confessedly more difficult than the satisfactory performance of such a work, and if he have failed at all, or generally, it will not be for want of a thorough knowledge founded on a large experience. And, in truth, the difficulties are greater even than those which are encountered in forming classifications of general diseases.

Although not a specialist like Dr. Bucknill, I have had to frame a classification of insanity, but with a view to teaching as well as to treatment. And this necessity of teaching has compelled me to adopt a method in fundamental respects different from that of the psychiatric physicians. A professor of any department must so teach that his students may be rendered both desirous and competent to advance it. As a department of the practice of medicine, psychological medicine includes a good deal more than insanity, since it extends over all departments of practice. As cultivators of this specialty, psychiatric physicians ought to advance it largely, being in exclusive charge of hospitals and houses for the reception and treatment of the insane—an advantage possessed by no other class of physicians. They have equally special advantages as the teachers of their own department, so that they almost monopolise that important duty also. And as the scientific development of psychological medicine must depend on the qualifications of those who may succeed their teachers in office, it is plain that a classification which aims merely at treatment, and excludes scientific methods, whether directly or indirectly, cannot and will not meet the requirements of the public and of the profession. Besides, it may be reasonably expected that psychological medicine shall be placed by those professing it on a scientific basis in all respects as broad as that of other special departments—as, for example, that of obstetric medicine. Are, then, the current classifications of insanity available to these objects? And if not, why not?—and how should they be constructed?

First, then, as to treatment. On inquiry, it is found, at the very outset, that under the terms "insanity" and "psychological medicine" are included only a portion of the disorders of the mind designated by Cullen and Sauvages *vesaniæ*—namely, those which are for the most part treated exclusively in asylums. Hence it happens that allied and transitional forms of mental disorder have no proper place in the current classifications, and consequently no fitting share in the discussions as to prevention and cure. But the transitional, at least, are the more important kinds to the general practitioner, since he has to treat that class of cases before they are so insane that they can be legally admitted into an asylum, and when most curable. On the other hand, a large proportion of cases detained therein are incurable. No one knows this fact better than Dr. Bucknill, and why it is so.

Again, in these psychological classifications the established principles of inductive logic are departed from in their construction; partly, perhaps, because of the difficulties inherent in the subject, but chiefly for other reasons not so admissible, which I will examine.

The logical principles of classification are well known. It is observed that a number of individual instances, or things, have characters, qualities, or properties such that they resemble each other as to these. On this ground they are classed together, and a name, or general term, is invented to denote the group. Then it is observed that a number of these individuals, thus similar, present differences in properties, characters, or qualities, from the others; and these are, in their turn, sub-classed together, and re-

ceive a name. In medicine we have states in general which resemble each other in this, that they differ from states of health as to mental states; those so differing get a name to distinguish them from other diseases. But, the comparison being with healthy mental states, we must differentiate and classify these latter, if we would differentiate the morbid states. So just as we say sane men are proud, or vain, or violent, or murderous, so we say insane men are. Dr. Bucknill is clearly right, therefore, in objecting to classifications lately made, which have for their principle the exclusion of everything mental or psychical. Further as to naming. Some *predominating* character or group of characters determines the kind of name. Thus animals with backbones are vertebrates; some of these, having mammæ, are mammals. Man is a bimanous vertebrated mammal; and looking at a number of individual men and seeing their differences in colour, we name them, ethnologically, white, black, red, and yellow men respectively. It is thus also in naming morbid states in general. The first generalisation in health is a predominant state of bodily feeling termed "ease"; the differentiation from that state of health is named "disease." Hence pathology is the science that treats of suffering, and as such has for its primary basis a psychological differentiation. The classifications of diseases may be either of the body generally, as fevers, or of special organs: in either case the differentiation may be either of organs or of symptoms, and the naming be accordingly. Thus pyrexia denotes a general state like the word insanity, and a predominant general symptom—"*calor major*," as Cullen has it.

Sauvages differentiated mental affections from other disorders, and classed them, under the term *vesaniæ*, by the characters of *error in imaginatione, appetitu, vel judicio*, and including numerous neuroses. But Cullen differentiated the organs or system of organs generally affected, and made *vesaniæ* an order of the class Neuroses—"*sensus et motus læsi*"—with the differentiation of *mentis functiones læsæ, sine pyrexia vel comate*. Dr. Bucknill differentiates *insania as a neurosis* into three classes with different psychical characters—namely, melancholia, mania, dementia, each with a predominant state named depression, exaltation, and debility respectively. These three classes are very common. Dr. Bucknill quotes Griesinger as an authority for them; but the terms were used by Juncken, Boerhaave, Sauvages, and Cullen, and no doubt, as Dr. Bucknill says of them, "because they are actually founded in nature." The old Roman law had just as simple and as natural a classification for legal purposes in the threefold division of mental disqualifications into furosity, fatuity, and facility; the furious being maniacs, the facile weak-minded people as to property, and the fatuous dements and idiots. It is by a like threefold differentiation that a practitioner has to be guided when he certifies that a patient is a suitable case for care and detention in an asylum. He is to decide whether the patient be a lunatic, or an idiot, or a person of unsound mind or insane simply—the last two being convertible terms. Both these legal classifications are fairly sufficient for their purpose, although they might be better, but neither deals with medical treatment.

Treatment being the object, a classification of insanity must have regard to the fact that the psychical manifestations, however generalised, are due to and indicate a disease of the brain to be treated. And here the word "disease" is used in another sense than the primary one, which merely denotes a mental state. It now means the cause or causes thereof inherent in the brain, or, more strictly, the conditions upon which the morbid manifestations depend, and which are the signs or symptoms. As a fact of experience, however, we have often to do what is always the first step in medical art—to treat the symptoms by name only, as all do who prescribe what will cure a cough or a colic without regard to the causes or seat. This is particularly needed in psychiatry, because we know so little comparatively of the causes of diseases of the mind. Hence we prescribe "sedatives"—so named from their action on symptoms—in furious mania with little or no knowledge of their *modus operandi*. We may say opium so acts because it possesses a "*vis dormitiva*," but that means nothing causally. What we do know is that sedatives are chemical compounds, and we can infer that they act on the brain as such. But of the relations of chemical composition of brain to chemical composition of remedy nothing is known as yet available to practice. For this kind of practice, which is founded on experience, an exact symptomalogical classification is the best, because we treat according to symptoms. But then the names of the groups of symptoms must correspond as exactly as possible with the groupings, and must by no means be vague. Dr. Bucknill has twelve sub-classes of mental disorders characterised by as many groupings of melancholia, mania, and dementia. It is observable, however, that the element of time, as to course, order, and duration of the symptoms, is omitted, unless the alternating melancholia, or the *folie circulaire* of the French, be considered as such, and thus prognosis, as a very important element in treatment, is excluded by neglecting it. Periodicity is a common character of occurrence and recurrence of symptoms, such as is implied in the term lunacy.

So far, a knowledge of causes is not necessary for treatment: given the symptoms as known by a name, and we prescribe the remedy. But the words "lunacy" and "melancholia" imply insanity due to particular causes; and, in fact, the next step in all knowledge is gained by inquiring into causes. The influences attributed to the moon and to black bile are hypothetical, but perhaps they are not wholly erroneous causes: the weather and biliary derangement *may* have a morbific influence on the brain. Practically, there are two kinds of knowledge of causes: the one, hypothetical and in a sense scientific, being deductive; the other, empirical and excluding theory. We know that starvation, or exhaustion from deprivation of food, or exhaustion from overwork of brain or from long sleeplessness, will be followed, under certain conditions of brain, by mania, which may or may not be preceded by melancholia. A large part of our knowledge of causation in medicine is of this empirical kind; it is only when we come to inquire into the nature of diseases and the *modus operandi* of drugs, or into the causes of causes, that we become distinctly rational, scientific, theoretical, or hypothetical in practice.

Now a naming and classification of symptoms may be founded secondarily upon some predominant class of causes, as in the old word "melancholia." This is an *etiological classification*, and as such must vary with the successive hypotheses and theories of causation. A fundamental question arises therefore, whether in classification we shall strictly adhere to experience in causation, or adopt hypotheses. If we adhere strictly to experience we can adhere as strictly to empirical treatment. All we need to do is to differentiate the kinds of symptoms due to special causes. Dr. Bucknill has founded his "orders" of insanity on "pathogenetic relations"—that is to say, on etiology, and that of the hypothetical kind, as to one order at least—namely, *melastatic* insanity. This kind of insanity, following upon, or coinciding with, "a shifting or ceasing of other disease, or suppression of discharges," is said to be *caused* thereby, or according to the well-known fallacy of *post hoc ergo propter hoc*.

Now metaphysicians have not yet agreed as to the meaning of the term "cause"; and, in fact, attach about thirty-nine different meanings to the word. How, then, is it used in medicine? In two ways: first, as when we say heat is the cause of the feeling of hotness; and, secondly, as when we say the *condition* of the nerve induced by heat is the cause of the feeling. In this latter mode we can always substitute the word condition for cause. When we trace out the conditions under which vital events happen in succession, we investigate the so-called order of nature—that is to say, the conditions in sequence and coincidence which have led up to the conditions of the moment—the then present state as indicated by symptoms, or the disease in the primary sense. That series of conditions which is next or nearest to it constitutes the proximate cause or causes; beyond that, in order of time, come the exciting; next to these, the predisposing; and in the still more removed distance from the first series, or the disease, the remote causes. These are also termed predisposing; such, for example, is heredity. Now in all the current etiological classifications of insanity there is no differentiation and classification of causes, such as has long been found useful in general practice, and which is absolutely necessary if we wish to investigate the order of nature in causation.

But disease is only the order of nature disordered. We have, therefore, first to inquire what is the natural order. What, for example, are the conditions of the brain—the proximate causes upon which ordinary mental states depend?

For the fundamental fact of experience is, that with every change in the consciousness, no matter what, there is a coincident series of changes somewhere in the brain-tissue. Where, then, do those departures from the healthy conditions of the brain take place upon which any particular kind of insanity depends causally? Of what kind are they? How are they begun—i.e., by what exciting causes? Under what existing conditions of brain, or predisposing causes? And, whether we aim at prevention or at cure, how do diet, regimen, and drugs modify the predisposing, exciting, and proximate conditions?

It is hardly necessary to say that, before we can answer all these questions, we must know something of the structure and functions of the brain, and that we must differentiate psychical states accurately before we can refer them to the brain as a whole or to any of the multitudinous parts which make it a whole. In short, a psychological classification of normal states of consciousness must be the basis of the pathological and, therefore, of any classification of abnormal states, as insanity. We can best illustrate from this point of view the defects of the current method of classification by applying it to diseases of other organs. Respiration is the function of the lungs, as mental activity is the function of the brain. Suppose, then, we name certain disorders of respiration *dyspnœa*, and divide them into three classes—say, of "exaltation," as *asthma*; of "depression," as *tussis* and pain; of "debility," as *expectoratio*. Next we arrange these into, say, twelve sub-classes or combinations; and then, according to their etiology or "pathogenetic relations," into orders—viz., simple, or idio-dyspnœa, allied, sequential, concurrent, egressing, metastatic, climacteric,—and each of these orders into genera, we should have exactly the same kind of classification as that of Dr. Bucknill for *insania*. It is hardly necessary to observe that the first step in such classification would be to consider respiration in reference to its mechanism, and at least differentiate it into the two correlative acts of inspiration and expiration, and consider asthma, cough, and expectoration in their relations to these and to the mechanism of respiration generally. Now there are two psychical states included under organic memory: the one conservative, or the record in the brain of what happens; the other reproductive, or the recall into consciousness termed reminiscence; both which are in relation to thought and to its cerebral mechanism what inspiration and expiration are to respiration—that is to say, they are fundamental factors without a knowledge of which no scientific knowledge of either healthy or morbid mental states is possible. Yet not a trace of any such differentiation of memory is found in any classifications of insanity whatever.

And so also as to the seat and nature of the functional and structural changes upon which insanity depends, and the observation of the pathological conditions upon which Dr. Bucknill and others found their species, whether anatomical, "neurotic, hæmic, or trophic." As to the neurotic, this knowledge would include the origin and anatomy of the diastaltic causes of insanity, including not only the morbific influence of diseased nerves and nerve-centres on the brain and on the causation of morbid mental states, but also of organs having physiological relation, like the ovaries and testes, or a pathological, like disease of the lungs, heart, stomach, and colon. Then as to the trophic, nothing short of a close application of the laws of evolution and reversion to the phenomena of cerebral development, nutrition, and psychical manifestations, could be available if we would make the method complete.

I must needs most fully admit the difficulties which attend upon any scientific method of investigating causes; what I urge is that the psychiatric physicians do not, in fact, adopt any one scientific method, truly such. To give an example in etiology, What are the causal relations of pain, whether mental or bodily, to insanity? Either kind will undoubtedly coincide with the impulse to commit suicide. This is true even as to lower animals. Does pain cause suicidal mania or impulse? To determine this question, we need to experiment and deduct. The psychical state so named certainly coincides with a corresponding brain-condition somewhere. Where, then, in any case? Then, if it be the answer that it is in some portion, not known as to locality, of the sensory system, what relation has that sensorial change to the motor acts? Does that cerebral change, or does the feeling of pain, excite the movements such as cause cries, flight, impulse to kill self or to attack others? Thus viewed, the question, simple as it appears, and so easily answered as a fact of experience (for the multitude do no more doubt that pain as feeling causes the cries and acts expressive of pain than that the sun actually rises and ascends and descends through the heavens), becomes the most fundamental question of mental philosophy, as the question of the motion of the earth became the most fundamental question of cosmogony; for it raises, in fact, another most fundamental question—namely, Is consciousness in general, or any particular kind, as imagination, perception, will, a cause?—or is it an effect of a cause or causes common to both the state of brain and that of consciousness that coincides? And this brings us to the causes and laws of evolution of brain and nervous system in men and lower animals in correlation with evolution of states of mind and consciousness; and so a biological classification, founded on evolution and reversion becomes necessary to a true scientific inquiry into the causes of morbid mental states. Since the evolutional differentiation of mental states belongs to psychology proper, the facts of that science must, it is obvious, be brought into relation with the facts of biology. It is on this principle of combining the two sciences that psychological medicine as a science can be established. I therefore set it forth in the syllabus of my course of Medical Psychology and Mental Diseases to be found in the Edinburgh University Calendar (1873–74, p. 102) as follows:—"The object of this course is to apply a scientific, as distinguished from speculative, psychology to the science and practice of medicine." As to the course of medical psychology:—"The first part of the course will comprise an exposition of the relations of consciousness to the laws of life in general, and the anatomy and functions of the brain in particular." I also give a biological classification in my text-book in accordance with this principle, but also both a symptomalogical and etiological classification of insanity, with a view to empirical practice.*

(To be concluded.)

* Principles and Methods of Medical Observations, &c., 2nd Ed., p. 376.

A CONTRIBUTION TO THE THEORY AND PRACTICE OF TRANSFUSION.

BY ROBERT BARNES, M.D., F.R.C.P.,
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THERE is nothing more sad than to see a woman in labour or childbed bleed to death. It is surely a just reproach to our art if such a catastrophe occur. The first thing to study is, how to obviate the causes of hæmorrhage; the second is, how to put a stop to hæmorrhage when actually present and threatening to continue; the third is, how to rally the system from dangerous exhaustion induced by the loss of blood.

The highest achievement of medical science would undoubtedly be to secure the first of these three ends, and thus to exclude all necessity for considering the remaining two. Unfortunately we cannot in all cases command all the essential conditions. We must therefore make up our minds how to deal with hæmorrhage and its effects. The number of cases in which hæmorrhage cannot be averted, now that we have so effective a resource in rebellious cases as the topical use of perchloride of iron, is becoming more limited every day. Still, even in some cases where hæmorrhage has been stopped, life may ebb away unless restorative means be applied. The greatest of these is transfusion. I rejoice to see the revival of this operation concurrently with the extending use of the perchloride of iron.

The following case, although not successful, is not without interest in several points:—A short time ago I met Dr. Devereux, of Tewkesbury, at a case of extreme exhaustion from secondary post-partum hæmorrhage. At one time it was thought the patient was dead, so utter was the prostration. The pulse rallied now and then, but often flagged so that it became imperceptible; the respiration was laborious and frequent, so loud that it could be heard in the adjoining room; the face and extremities were cold; the

voice almost extinct. She swallowed beef-tea and port from time to time, but soon vomited all. This was about 8.30 P.M. The extreme prostration, and the hopelessness of getting any nutriment absorbed either by stomach or bowel, led us to look upon transfusion as the last hope. Discussing the means of accomplishing this, we found the best we could do was to use an aspirator-syringe. This had to be fetched at a distance of five miles. In the meantime I had got everything ready. The gardener offered an arm. At 10 P.M. the operation was carried out. The syringe being made on the principle of the stomach-pump, with reversible action, answered extremely well. We filed down the point of the aspirator-trocar, and this served very fairly for insertion into the patient's vein. As circumstances left no choice between immediate and mediate transfusion, so were we compelled to defibrinate the blood. The man who yielded the blood was fat, and his veins small, so that it was with difficulty we obtained four ounces. This was defibrinated by whipping with a silver fork and filtering through a cambric handkerchief. Believing that one factor in the danger attending these cases of prostration is the merely dynamic one arising from the absence from the heart and vessels of fluid to act upon, and considering that we had so small a quantity of blood at our disposal, I first filled the syringe with a solution of phosphate of soda, carbonate of soda, and chloride of sodium, at a temperature of 100° F. Pumping this through the syringe also served to get rid of air from the apparatus. The vein in the patient's right arm was found by pinching up a fold of skin, transfixing it transversely to the course of the vein, and then dissecting through a little fatty cellular tissue. It was then pinched up by forceps, and a sufficient opening made into it. The trocar was passed one inch and a half into it. The injection was then slowly made. The blood was partly mixed with the saline solution; altogether about six ounces of fluid, including all the blood, was thrown in. Almost instantly the pulse improved, warmth spread over the body, the face and manner became more natural, the respiration became tranquil, and we were tempted to hope that she might pull through. We prepared everything for repetition of the transfusion in the morning should the condition be favourable. But the rally was short; the respiration again became moaning, rapid, and laboured; the pulse flagged, and the patient sank at 1.30 A.M., about three hours after the injection.

Amongst other reflections suggested by this and similar cases are the following:—

1. The vomiting of the beef-tea and wine, which had been accumulating in the stomach from repeated exhibition in small doses, in an unchanged state, and the obvious failure of any restorative effect, are proofs that the vital power is so low that nothing is to be hoped for in the way of replenishing the empty circulation from absorption.

2. The rapid and laboured respiration is evidence of the craving of the system for oxygenated blood. Air goes in and out of the lungs with great rapidity, but it has nothing to act upon. Its obvious effect is to accelerate the cooling of the body.

3. When we see things at this point—extreme exhaustion, feeble or imperceptible pulse, rapid laboured breathing, non-response of the system to nutriment and stimulants administered by the stomach or rectum, and vomiting and great agitation,—we may fairly conclude that direct injection into the vessels is indicated.

4. Blood may be used either whole or defibrinated. The choice will be governed by circumstances. If we have Aveling's or other proper apparatus to practise transfusion from arm to arm, so that the blood passes direct from giver to receiver without ever being exposed to the air or allowed to rest, this will often be the preferable plan; but where the proper apparatus is wanting, as it is likely to be, defibrination is better.

5. The experience of Dr. Little in cholera cases, and other considerations, show that saline solutions may be injected into the veins with advantage. I believe that they may, with great utility, be used to supplement or to dilute the blood used in transfusion for loss of blood, and that not only is the saline fluid useful by virtue of its chemical properties, but also by its physical quality of bulk, supplying a volume of fluid upon which the heart and vessels can act more effectually.

6. That transfusion will be more and more extensively resorted to appears to me certain. Its extended use, however, must greatly depend upon a general understanding of the conditions that call for the operation, and of the various modes of performing it. So long as it is considered necessary to have a special apparatus, the operation must be performed rarely. But let it be understood that blood either whole or defibrinated will do, and that almost any syringe can be made to answer, and the great obstacle to the extension of the operation will have vanished. Nothing can be more easy than to furnish every stomach-pump case with a flexible tube to which a transfusion-canula is attached. As no practitioner of medicine ought to be without a stomach-pump, the *necessary* apparatus will never be wanting. I should not hesitate to use an ordinary Higginson's syringe.

7. Here, as in all great emergencies, an essential condition is to *act in time*. Just as the perchloride of iron may be used too late, so may transfusion or injection be delayed until the nervous centres will have lost the power of responding to the fresh pabulum supplied.

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TROPICAL DYSENTERY.

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WITH a West African war on our hands, a few remarks on this, the most dangerous disease of the tropics, may be of some service to my younger brother-officers, coming from one whose fortune (or rather misfortune) it was to spend upwards of twenty years in the daily treatment of dysentery in one of its favourite haunts, the lovely island of Ceylon.

The statistics of this disease given in our Military Medical Returns are by no means reliable. For this there are various reasons: one is the evil custom prevailing of entering a soldier's disease in the books at the moment of his admission into hospital, and rarely taking the trouble to correct any error in naming it subsequently established; another is the want of attention to the pathognomonic symptoms of real dysentery, the bloody mucous stools, distinguishing it from every form of diarrhœa, however attended with griping and colicky pains. Some officers enter all cases presenting these latter symptoms under the head of "acute dysentery" in countries where the disease is endemic; and, of course, their percentage of mortality, as compared with admissions, is widely different from that shown in the returns of a careful officer who never enters any case as dysentery without previously satisfying himself that the discharges are such as above described. The dysenteries of different climates vary in their inherent character, as do fevers, but there is much more of a strong family likeness among the former than among the latter, which often differ most essentially, and do not at all pass from one type to another readily and frequently. Not so with dysentery. However mild and trifling may be its symptoms at their commencement, it should never be lightly regarded, nor the case be left without vigilant watching, once bloody mucous stools have shown themselves, no matter how free from pain or feverishness the patient may be. Dysentery, *however mild*, is always capable of assuming, either suddenly or, it may be, most insidiously, all the characteristics of a mortal disease, defying all remedies and leaving the doctor conscience-stricken and aghast at what will then appear to him his own inconceivable blindness and delay in taking the alarm. I beg of my younger brethren ever to bear this in mind. To do so will save the tropical practitioner from many an hour of bitter anguish and self-reproach, I can assure him.

The military percentage of mortality from the endemic dysentery of the tropics is always high, even when the patients are strong, healthy, well-fed men. When the disease prevails among worn, cachectic spirit-drinkers, they die rapidly, and if there be any circumstances of exposure and bad food to contend against, so that the men's constitutions have acquired a scorbutic taint, in such case dysentery spreads and kills like the worst form of plague. This was fearfully exemplified nearly fifty years ago in our first Burmese war, when our unfortunate soldiers, fed on rotten salt provisions, drenched with rain, and treated by calomel and opium, died

of scorbotic dysentery in hundreds. Time is of the very greatest importance in tropical dysentery. Let a case run on for three days, and it too often defies you to overtake it. Hence the importance of insisting on the non-commissioned officers sending off to hospital every man observed going often to the rear, and of instructing the men, by placards put up in the barrack-rooms, as to the importance of ascertaining the nature of their discharges when affected by looseness, and reporting sick at once if blood and slime are observed in them. Many a man have I known to lose his life from fancying his ailment was merely "piles," requiring only time to disappear spontaneously. Hence, too, the paramount importance of gaining the soldier's confidence, so that he may learn to regard you as his best friend, and resort to you for advice, whenever he feels the least ill or uneasy about himself, without fear of being harshly addressed as a skulker, or told before his comrades that there is nothing whatever the matter with him. Young officers, too, often forget how sensitive soldiers are to such remarks, and how severely the public opinion of the barrack-room deals with anyone suspected of shirking his tour of duty. Many a man have I known to lose his life with dysentery from a point of honour on this tender subject. Often, when told by a man that he had been ill with looseness &c. for days, and remonstrating with him for his folly in not reporting it, have I been told, "You see, Doctor, I was for guard the third day, and I would not come in till I did my duty, but, indeed, I had terrible work to keep to it all last night." Most generally they were Irishmen who so acted. Ah! the Irish are noble fellows, born soldiers; only treat them kindly, and they will follow you through fire and water. Hence, too, the wisdom of never sending away any man who reports himself affected with dysenteric symptoms, or, indeed, with purging generally. No matter as to how good tongue, skin, and pulse may be, if the man says he is purged, and especially if he complains of straining at stool, detain him for the day, and give him the indicated medicine; or, if suspicious of his veracity, shut him up with a close stool, and call on him to show you at the evening visit the *corpus delicti*. Let not my young brethren hink these cautions are needless.

I knew a fine young Irishman, a prisoner at hard labour, who reported himself again and again to his surgeon from the prevôt. The doctor was an ignorant and indolent selfish brute, a Peninsular hospital-assistant, who, after being fossilised in a Scotch highland village, was dug up and brought on full pay to serve, from motives of economy. It would have been cheaper for Government to have given him £1000 a year to stay where he was. He became surgeon of one of our finest regiments, and used to boast of going round his hospital in the tropics in twenty minutes, while other fools, as he called them, took six times as long to do the like. The fellow regarded every man who came sick to hospital much as the rustic board of farmer guardians regard the poaching loafer who throws himself on his parish. He first scowled at the prisoner, felt his pulse and looked at his tongue, then told him there was nothing but laziness the matter with him, and ordered the escort to march him back. In two days more the man returned, complaining sorely. This time he was bullied as usual, but got a dose of oil and laudanum. In two days more he returned unmistakably ill—indeed, hardly able to walk. He was of course put to bed, but the disease had got beyond being overtaken. His fate was sealed, and on the morning of the day he died, our zealous, excellent P. M. O. came round the wards. He was always grieved to the soul to see any man die, no matter how, but quite distressed when death could be reasonably imputed to any neglect on the part of patient or doctor; and with respect to dysentery, he ceaselessly inculcated the cautions I have already dwelt upon. He saw at a glance that the poor prisoner's hours were numbered, and on hearing from him how long he had been ill, and only a few days under treatment, he began mournfully to ask the dying man why he had so thrown away his life, why he had not reported himself at once, before his disease became beyond the power of medicine to control? Here, again, the noble characteristics of the Irish soldier displayed themselves. He disdained to "stag," to turn informer. He said not a word, but turned his dying eyes full on the face of his murderer (for such he surely was), who stood beside the bed pale as death and bedewed with the sweat of terror, for well did he know that if the truth had been revealed, the noble-hearted P. M. O. would have brought him to court-martial, even had he been his only brother. Profound silence reigned in the ward, the good old doctor sighed deeply, gave the poor fellow a kindly farewell pat, and, brushing his old eyes, left the hospital.

In another most distinguished corps the adjutant was a "ranker," and a perfect tyrant. He got hold of a newly-appointed surgeon, a bad style of man, one who had never served before in the tropics, and who was wholly ignorant of their diseases. He was quite overwhelmed by his long sick-list, and, applying to the adjutant, was told that most of the fellows were malingerers, trying it on with a new doctor. He would order the sick-list to be brought first to him every morning, and, examining the men, would mark those whom he knew to be skulkers, and so put the doctor up to their dodges. This was done, and the surgeon remanded all marked men to duty. The season was a sickly one, bad dysentery prevailing generally. The men—a very high-spirited, superior set of fellows, though of poor stamina, being mostly Lancashire lads, many Manchester clerks, &c.—grew savage and desperate. On finding themselves in for dysentery, they took to drinking, sold their kit, finished everything, bade farewell to their comrades, and went into the sick-list never to return. Often they had the seats of their white trousers (worn in those days) all stained with bloody discharges, and then, turning round their sterns, they asked the doctor whether he would now believe they were ill? Nemesis overtook both these gentlemen. One was cut to pieces by pirates; the other died miserably with secondary syphilis and drink together.

Another most important point is the careful examination of the discharges of every dysenteric patient. This is a most disgusting and trying duty in the tropics, but a conscientious officer must go through with it, for it is essential to the successful treatment of the disease. Every care must be taken to preserve the stools fit for inspection. The patients must be cautioned to use a separate vessel for micturition, into which all paper is to be thrown. Every man's pan must be carefully marked and distinguished. I found, in India, that the close stool-pans there, being much deeper, narrower, and more conical than our queen's-pattern stools in Ceylon, presented great difficulties to drawing accurate conclusions from their contents. After one of those terrible nights, when the mercury used at midnight to mark 112°, rendering sleep impossible, it was a trying sight to behold from ten to twenty pans awaiting one in the hospital verandah, each with its marked wooden lid, and the hospital sergeant waiting, prepared to do the honours. "This is Murphy's, sir; this is Smith's; this is Flanagan's"; and so on through the whole catalogue, while I, with heaving stomach, made a brief note of the appearance of each under the respective names already written in the book presented by the sergeant. Those were awfully trying days. An improvised hospital, devoid of all needed conveniences, the wards crowded to the door, and cases of confluent small-pox mixed up with the rest, covered with flies feasting on the broken pustules, and then lighting on every one alike! It was indeed a severe test of the value of the immortal Jenner's great discovery. How we blessed his memory!

The last general caution I have to give before proceeding to consider the nature and treatment of dysentery, is with respect to discharging men apparently recovered from severe attacks of it. This is a point requiring great attention. Indeed, few things in the treatment of the disease can be compared in importance with the admission and discharge of patients. The first can never be too early decided on; the latter can hardly be too long deferred. A great many dysenteric convalescents relapse and ultimately die solely from having been allowed to return to duty and to barrack diet while still quite unfit to share in either. A little consideration will show how long it must take to fit anyone who has had severe dysentery for a return to ordinary life and avocations. The essence of the disease is ulceration of the bowels. Now anyone who has ever had, or who has had occasion to closely observe, an external ulcer, must be aware what a long time elapses before it thoroughly heals, and before its newly acquired cicatrix loses its morbid sensibility, and becomes able to bear with impunity even moderate friction, such as that of clother, chance contact, &c. Take up any reports of fatal cases of dysentery, even those detailed from time to time in the Army Medical Blue-book, we shall there find that Private

A. B—— was admitted with acute dysentery; treated for a fortnight or twenty days; "discharged cured." Readmitted, complaining of purging and a return of his former symptoms, after about ten days of barrack life and barrack diet; detained in hospital for ten days or a fortnight, then again "discharged to duty." Returns after a few days' trial of it, the old symptoms present, and the general strength much impaired. Death follows, and the post-mortem examination shows extensive ulceration of the large intestines in the stereotyped form. Now if such cases be detained in hospital and carefully watched as regards the nature of the dejections passed, so as to guard against any insidious breezing up of disease, while a deaf ear is turned to all remonstrances against detention until the state of the legs and gradual complete recovery of weight attest the restoration of digestive power and general health, many lives too commonly lost by inexperienced practitioners will be saved. Early admission and *very tardy* discharge to duty are golden rules in the management of dysenteric patients. Men get sick of the monotony and enforced temperance of hospital. They long for a big drink after temporary involuntary abstinence. They besiege the doctor with requests to be allowed to return to their duty, or, still more objectionable, to be discharged as convalescents—a thing that should never be done in dysenteric ailments. Once in barracks, drink and tough indigestible rations soon bring on a return of looseness; this is battled against from dislike to hospital, and also from feeling ashamed of going sick so soon after insisting on being discharged. Very likely some old hand recommends a fiery potion of arrack, with plenty of green chillies steeped in it, as the best prescription possible "for keeping the worms out of your liver." This is tried for a day or two, with such results as might be expected; and the man at last returns reluctantly to hospital, with ulceration insidiously spreading all along the colon; that is often the case, young officers should remember, without any pain or tenderness on pressure of the abdomen, or quickness of pulse.

In 1858, at Dinapore, on taking over charge of my hospital from the present Deputy Surgeon-General Thompson, he drew my attention to a nice young Irishman, a Corporal M'Ewen, quite worn down by long-continued dysentery, such as only a strong constitution could have so far resisted. On leaving the bedside I remarked, "That poor fellow will die, I fear." "Die! of course he will," said my friend, who had many years of Indian experience; "the d——l a one like him I ever saw recover yet." The man was a favourite of mine, and I determined to spare no trouble to save him, if possible. I regularly slaved after him, examining his motions twice a day, and constantly changing his medicine; for in long-standing dysentery, as in old conjunctivitis, the mucous membrane soon grows insensible to any one remedy long administered, and astringents, to do good, must be constantly varied. By slow degrees my efforts were crowned with success. M'Ewen became able to leave his bed, and, after some time, to take moderate exercise. He then began to beg to be discharged, next to urge it, and finally to demand and insist on being allowed to return to his duty. To all such requests I had but one answer—an order to roll up his trowsers and show me his legs. These presented a very poor show of muscle, and enabled me to fix a remote date for granting his wish. An inquiry whether he proposed to go on guard with legs like those produced a general grin throughout the ward, and, no doubt, a considerable amount of bantering after my departure, so that he was fain to be sulkily content with a promise that as soon as he could show me a decent pair of calves I would allow him to go out and make use of them. I beg my young comrades to note that *six months elapsed* before such a degree of muscular strength was developed as to fit this man for duty. I then discharged him, and never saw him marching round a relief afterwards without a feeling of the greatest internal satisfaction at the happy results of all the pains I took with him. Beyond all doubt this man had extensive ulceration all along the colon—weak, flabby, pale sores, such as would have soon done well on the legs under careful strapping, but which required months to heal soundly when developed on the colonic mucous membrane.

Having now touched on the principal points in the general management of patients affected with tropical dysentery, I propose hereafter to speak of the treatment of such cases in hospital, in their various forms and stages.

THE TREATMENT OF WOUNDS ON THE ANTISEPTIC METHOD.

Being a Report and Commentary after a visit to Prof. Lister's Wards in the Royal Infirmary of Edinburgh.

BY SAMPSON GAMGEE, F.R.S.E.,
SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

CONTEMPORARY history has afforded signal examples of the proneness of vanquished men to attribute their defeat to treason. In the battle for truth, it is every day proved that the number of men is very few who, indifferent to personal sacrifice, care nothing for the victory of their own opinions so long as the conquest of truth in promoted. Scientific and doctrinal controversies very soon acquire a personal character; comprehensive observation, judicial calmness, and patient effort come to be despised; and those who are worsted are prone to call good faith in question, and treat with irony and contempt facts which they cannot disprove.

This state of things has been abundantly exemplified in the discussion on the treatment of wounds—a subject which was supposed to have been settled by the introduction of water-dressing through the Liston and Syme school. Without attempting to trace the development of differences which have cropped up so prolifically since that date, it may be observed that the complacent calmness of supposed orthodoxy was finally disturbed by the heretic blast sounded in Professor Lister's clinique, at that time in the Glasgow school. His counsel to rub strong carbolic acid into the innermost recesses of a compound fracture, the carbolic putty and oil, the gauze, spray, and protective have followed step by step, finding many professed imitators of the antiseptic method, some admirers, and not a few savage critics, unsettling many things, but hitherto winning no very general assent.

A close follower of Professor Lister's work and a repeated visitor at his clinique, first in Glasgow and then in Edinburgh, it seemed to me that the time had come for endeavouring to form and to express a judgment on his teaching and practice. Accordingly I paid my old friend and fellow-student a visit recently (17th inst.), and proposed to go round his wards, either as a private visitor or as a critic taking notes of all I saw and heard, and publishing my observations for the benefit of the profession, with such remarks as I deemed just, and calculated to be interesting and instructive. Professor Lister, who had had no notice of my intended visit, said I might adopt either course, but he would prefer the latter. He felt confident of his power to convince me of the soundness of his teaching, and of the advantages of his practice; and he was good enough to add that he relied implicitly on the sincerity of my endeavour to see the truth for its own sake, and, having seen it, on the energy of my resolve to promulgate it.

The following clinical notes are somewhat desultory, as good bedside observations suggested by facts as they crop up generally are, but they will be found to embody the substance of Mr. Lister's teaching, and are vouched for as correct; for not only were they taken down by me verbatim, but slight verbal inaccuracies were corrected on my going carefully through the MS. notes with the Professor, who has also revised the proof. The latter remarks apply to the notes of fact, not to my comments, for which I am alone responsible.

Reserved Male Ward.—Matthew R——, thirty-five years ago, received a gunshot wound on the inner and back part of the right leg, at and just below the ankle. The result was a sore which never healed. He was admitted on Nov. 19th last, with a very large, ill-conditioned ulcer. Though healing rapidly, it is still several inches in extent. On admission the sore was sweetened with a chloride-of-zinc lotion (forty grains to the ounce). The epidermis around was cleansed with a carbolic-acid lotion (one part to twenty of water). The latter lotion acts best on the epidermis, the former on the raw surface. The wound, once sweetened, was enveloped in antiseptic gauze, and next day dressed with boracic lint, which is prepared by dipping lint in a hot saturated solution of boracic acid, then taking it out, and letting

it dry. The lint is then loaded with crystals of the acid, and these crystals are unctuous, not harsh. If you applied the boracic lint next to the sore, you would stimulate it too much with the acid—you would have too much suppuration, too little cicatrisation, and, on removing the dry lint, you would peel off the epidermis, and the discharge might irritate by tension by accumulating under the lint; so we interpose between the lint and the sore a "protective," consisting of oil silk varnished with copal varnish, and coated with dextrine to permit it to take watery solution of the antiseptic. The object of the copal varnish is to prevent easy permeation by carbolic acid when that acid is employed. Carbolic acid is used in applying the dextrine, but it soon goes, and the protective is not antiseptic itself; its object is to keep out the antiseptic; but it must be put on in an aseptic state, and must, therefore, be dipped in antiseptic lotion before application. This lotion is a saturated solution of boracic acid, with the addition of a few drops of litmus to distinguish it from colourless carbolic lotion. The sore having been washed with the boric lotion lightly, the protective dipped in lotion is put on the sore and the tender epidermis around, with boracic lint outside. If we were to put it on dry, we should put on a septic lint, because boracic acid is not volatile, and septic particles—organisms, I may say—are not deprived of septic energy by it in the dry state; so we dip the boracic lint in boracic lotion, and then we are sure it is free from anything septic. Boracic acid is little soluble in cold water, and at the temperature of the body the discharge may go through boracic lint without carrying off all the acid. Boracic lint consists of equal weights of lint and boracic acid, and under such lint there is no sore but would keep sweet twenty-four hours.

Matthew R——'s wound was dressed every day (henceforward to be dressed only once in two days) with two layers of the boracic lint, and then a gauze bandage. Lister does not care much about pressure in such cases. (The wound in this case, and the surrounding parts, look beautifully clean and rosy, are perfectly free from odour, and cicatrisation is advancing rapidly. The wound, which on admission was intensely painful, is now quite free from pain.)

Donald M'C——, eight months ago, while in an epileptic fit, fell on the fire, destroying a large part of the scalp on the right side, largely exposing and burning the bone, destroying the external ear and the zygoma and much skin on the back of the neck and shoulders. The wound is dressed every other day in the same way as in the former case. The protective is applied on the granulating and cicatrising parts, not on the bone, which is covered directly with the boracic lint. Though nearly the whole bony wall of the right side of the head is exposed, there is no putrefactive smell whatever. The wound is dressed as in the former case, with the exception that on the granulations adjacent to the bone is applied boracic ointment, consisting of one part of boracic acid to ten parts of axunge and one part of glycerine. At first we saw the entire zygoma sticking out as dead bone; we then saw granulations growing over the bone. The bone, just before being quite covered from each end, became pink, showing that the scale of dead bone had become thinned by absorption from within; and now it is all covered without exfoliation. With the dead bone, as with the catgut in the antiseptic ligature, the dead tissue is absorbed by the living tissue near it; for if the dead tissue do not become acrid by putrefaction, it is as good for living tissues to feed upon as clotted blood. I said, "What about the septic particles, as the vast wound is lying exposed during this instructive discourse?" "Oh," replied the Professor, "they are lying in abundance upon it; we destroy them by washing with the boracic lotion." (The vast wound was beautifully clean and quite odourless, and the granulations could be seen encroaching upon, and adherent to, the edges of the bone, and in several places as little rosy buds projecting above or shining through and just under the dry bony surface. The man was in excellent health, and quite free from pain.)

In applying antiseptic gauze dressing, the deepest layer of gauze, as well as the protective, must be dipped in carbolic lotion before applying it, because septic particles adhere to it, and carbolic acid is given off so slowly by the gauze at the ordinary temperature of the body as not to kill the septic particles.

William H——. Three days ago the Professor removed a quantity of carious bone from the right foot. He removed the ends of three metatarsal bones and a good deal of the adjacent tarsus. After gouging, he applied the sulphuric-acid (Pollock's) treatment. (The large wound is clean, odourless, and without pus; and there is neither pain nor constitutional disturbance.)

In fistula in ano, and in lithotomy and other wounds in the vicinity of the anus, as well as those communicating with the mouth or a putrid sinus, Mr. Lister applies forty grains of chloride of zinc to the ounce of water, to *pickle* the wound, so to speak; the fact being that chloride of zinc has the remarkable peculiarity of rendering the cut surface incapable of putrefaction for two or three days, though in contact with septic material.

Ward No. 5.—William R——, aged forty-two. Temperature 98·2°; pulse 84. On Thursday last, for large popliteal aneurism, the femoral was tied just below the apex of Scarpa's triangle; the operation was performed antiseptically, and with the prepared catgut. Three carbolised silk sutures were put in. Metallic sutures are not used, because aseptic silk is softer and easier to manage, and antiseptically equally safe. The dressing consisted of—firstly, protective; secondly, a sponge squeezed out of carbolic acid lotion; and, thirdly, gauze dressing overlapping that. No drainage-tube was used. That was a mistake. The drainage-tube is more important with antiseptic treatment than without it, because the antiseptic treatment irritates the cut surface, and in the first few hours there is more serous effusion than without it. With the three stitches and no drainage-tube inflammation occurred, and the man complained of pain on the second day, when we removed the dressing, and found redness, tension, and already some pus. The lips of the wound having become adherent externally, the serous oozing from the deeper parts could not find its way out, and irritated, not chemically, but by its tension, affording an example of inflammatory or nervous suppuration, as distinguished, on the one hand, from antiseptic suppuration, due to the direct action of the antiseptic on the tissues as a chemical irritant; and, on the other hand, from septic suppuration, due to the acrid products of putrefaction, which resemble an antiseptic salt in acting on the tissues as chemical irritants, but differ in the all-important circumstance that they are perpetually multiplied by the septic fermentation which spreads wherever it meets with a favourable nidus. In this case it was purely inflammatory or nervous suppuration. When two stitches were removed the man was easy. (He is in no pain. I saw antiseptic dressing removed; no smell; a little pus on the surface, but none came up on deep pressure.) Does not use carbolic oil, because dirty. *(To be continued.)*

A Mirror OF HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

NECROSIS OF OS CALCIS; REMOVAL OF SEQUESTRUM BY BLOODLESS METHOD; REMARKS.

(Under the care of Sir WILLIAM FERGUSSON.)

THE bloodless method is especially valuable in operations like the subjoined, where the manipulations have to be carried on in tissues in close proximity to such important structures as the ankle-joint. The absence of hæmorrhage allows of a complete inspection of the diseased part, so that the surgeon can readily ascertain what he is cutting. For the notes of the following case, the interest of which is enhanced by the addition of the remarks made by Sir Wm. Fergusson, we are indebted to Mr. William Rose, surgical registrar.

F. G——, a clerk, aged twenty-seven, was admitted Nov. 6th, 1873, with disease about the right ankle-joint. In January last, from no assignable cause, a slight red swelling appeared on the outer and back part of the right heel, which caused much pain and made the patient lame.

The swelling increased in size, and burst in May, and discharged a quantity of offensive matter. Since this he has been laid up, and there has been a constant discharge. The pain has been less, and only occasional. He has always enjoyed good health, and there is no history of syphilis.

On admission, there was a sinus on the outer side of the right heel, an inch and a quarter behind and below the external malleolus. The opening was surrounded by fungoid granulations, and a probe passed in through it led directly to rough bone at the posterior part of the os calcis, which was evidently diseased. The ankle-joint was quite healthy; no impairment of motion.

Nov. 8th.—Chloroform was administered, and the elastic bandage and india-rubber piping were applied according to Esmarch's method for temporarily arresting the circulation. Sir William then enlarged the sinus with a probe-pointed bistoury, and, after using the cutting pliers, elevator, and sequestrum forceps, removed an irregular piece of necrosed bone about an inch in diameter, representing the whole of the posterior part of the os calcis, which was lying comparatively loose in a cavity partly formed of new bone. After removing the india-rubber tubing there was only slight hæmorrhage, which soon ceased; and the wound was filled with oiled lint and covered with water dressing.

Sir William remarked that necrosis of such a bone as the os calcis was not so common as caries, although it was not unusual to find a small piece of necrosed bone lying in a carious cavity. It was rather remarkable that, although the whole of the posterior part of the bone had necrosed, there seemed no interference with the attachment of the tendo Achillis. Probably the deposit of new osseous matter thrown out had been sufficient for its support.

Nov. 14th.—No constitutional disturbance; wound looking healthy. The cavity is rapidly filling up.

Dec. 6th.—Wound nearly healed.

20th.—Will leave hospital in a day or two.

In making some remarks on bloodless operations, Sir William began by saying that the method of temporarily suspending the circulation, which had just been adopted, was that specially devised by Professor Esmarch, but that the principle was not new; that a somewhat similar process had been carried out in India years ago in cases of removal of large scrotal tumours; and also that it was the frequent practice of surgeons in this country, when about to amputate a limb, to hold it up above the rest of the body for some time before the operation to allow a great portion of the blood to gravitate out of it. He then observed that this was quite a revolution of the practice of the older surgeons, who would have been horrified at such a proceeding as this, since they were in the habit of taking ten, twenty, or thirty ounces of blood from a patient before his undergoing any capital operation. But at the same time Sir William thought that some arguments might be reasonably brought against the uniform adoption of this method; that though there were many cases in which patients could not afford to lose a drop of blood, yet there were others—for instance, in those of amputation in the thigh—where the sudden addition of so large a quantity of blood as that contained in the limb to the rest of the circulation might be more injurious than the loss of some part of it with the limb when removed. He further observed that this bloodless method had been tried by his colleagues with no bad results at present, but that there had not been sufficient time to note whether there was any difference in the progress of wounds after its use. In operations for necrosis especially, this method greatly facilitated the manipulations of the surgeon. Previously the hæmorrhage from the vascular structures cut through, so obscured the part that the sense of touch was the only guide to the operator; but now the surgeon could see the sequestrum, ascertain its extent, and easily distinguish it from its new bony casing.

ST. BARTHOLOMEW'S HOSPITAL.

SUPPRESSION OF URINE FOR ELEVEN DAYS; DEATH; DESTRUCTION OF LEFT KIDNEY BY OLD INFLAMMATION; RECENTLY IMPACTED CALCULUS IN RIGHT URETER.

(Under the care of Dr. SOUTHEY.)

IF the account given by the patient in the following case may be trusted, it appears that between the 10th and 22nd of April she passed no urine. There was complete suppression. It is certain that during the time she was under observation in the hospital, eighty-four hours, no urine was passed separately. There was a suspicion that on the 21st an ounce or so was passed at stool, but this was rendered doubtful by the evidence afforded after death.

M. C——, a short, stout, married woman, aged fifty-two, was admitted on April 18th, 1873, for vomiting and suppression of urine. The following facts were elicited:—The patient had led a sedentary life, was a booksewer, had suffered many years with frequent violent headaches attended with nausea, and had bleeding piles. On April 10th she went to work as well as usual, but in a short time she felt sick, and, without having recently taken food, suddenly vomited. In the left side she experienced a little pain, which continued up to the time of admission.

On admission the patient stated that since the 10th she had not passed any urine. Her appetite was bad from the commencement of her illness, and for a few days before admission she had vomited everything she took. On the day of admission she first noticed that her feet began to swell. The patient appeared well nourished; the skin was warm and dry, complexion sallow, cheeks flushed, eyelids puffy, abdomen tense, legs somewhat anasarcous, especially about the ankles. The abdomen was tender, but the skin generally was very sensitive, so that the patient complained of pain whenever she was touched, although when her attention was distracted she bore without flinching considerable pressure over the stomach. The bladder was apparently empty. Over the situation of the transverse and descending colon there was a lumpy, doughy feeling, especially marked in left hypochondriac region, with dulness on percussion, which led to the surmise that the large intestine was loaded with solid fæces. Temperature 97·3°; pulse feeble, 84; respiration 24. The examination of the thoracic viscera yielded negative results. A warm bath was ordered, and a dose of senna mixture, followed by an enema of warm water, was given. The diet consisted of milk and beef-tea, with a little brandy-and-water in the event of the sickness continuing.

April 20th.—Slept well; bowels freely opened by the physic; no urine passed; the patient retched frequently during the day, and brought up small quantities of bilious mucus. A mixture containing spirits of chloroform was ordered, and the dose of brandy increased, as the pulse was becoming more feeble and the temperature was only 97° F.

21st.—Tranquil; answered all questions; had slept a little, and complained of no pain. The bowels had again acted, and the nurse stated that a little urine was passed at the same time.

22nd.—The patient died rather suddenly in the morning; was quite sensible a few minutes before she expired.

Autopsy, sixteen hours after death.—Slight œdema of both legs; lungs and pleuræ natural; heart normal, with the exception of slight hypertrophy of left ventricle; aorta very atheromatous; liver extended from upper border of fourth rib to the umbilicus, and was considerably constricted, as if from old tight-lacing; the hepatic substance presented a deep brown colour on section; stomach and intestines normal. Left kidney weighed nineteen ounces and a half, was nodular, and appeared putty-like beneath the capsule. On making a section of it, a large quantity of white creamy fluid escaped. No trace of the secreting structures could be seen in the surface of section, which was divided into several large cysts, which were stuffed with a white pultaceous material. The ureter of this kidney was similarly filled, but its contents were more cretaceous. Right kidney weighed ten ounces. Pelvis and ureter distended with a bloody fluid of offensive odour, decomposed urine, and blood, and contained several brown-red masses of the consistence of blood-clots. The ureter was very much dilated up to a point on a level with the brim of the pelvis, where a small conical calculus with the base upwards was tightly impacted. There was considerable injection of the mucous membrane of the ureter and pelvis of the kidney. The renal substance was soft, the vascular zone purplish, the cortical portion opaque and white. It was, in fact, a hypertrophied kidney with a broad and deep cortical substance and with flattened and shortened papillæ, the result of recent distension of the pelvis. A number of small fibroid growths surrounded the uterus. The bladder was contracted and perfectly empty.

UNIVERSITY COLLEGE HOSPITAL.

FUNGATING TUMOUR OF MAMMA; REMOVAL BY GRADUAL STRANGULATION WITH ELASTIC LIGATURE.

(Under the care of Sir HENRY THOMPSON.)

WE have already given an account of the operation which was performed in the following case, some remarks on which by Sir H. Thompson appear in another column. But, according to promise, we here furnish our readers with the details of the subsequent progress of the case. For the following notes we are indebted to Mr. G. B. Browne, house-surgeon.

Maria B——, a married woman, aged fifty-two, was admitted on Nov. 18th, 1873, with a tumour of the right mamma. The patient has had five children, three of whom are dead. Twelve years ago she noticed a small lump in the right breast, but as it caused no pain or inconvenience, no notice was taken of it till a year ago, when it began to increase in size. Two months before admission the skin over the tumour became very red and discoloured, and in about a month it broke and discharged pus and blood.

On admission both mammæ were large and pendulous, and of equal size, but projecting from the apex of the right, just above the nipple, was a large fungating mass, of spherical shape, about three inches in diameter. The projecting mass was of a dark-purplish colour, except at the summit, where it was black and sloughy, and exuded fluid of a most offensive odour. The tumour was not tender nor very hard. No enlarged glands were found in the axilla or above the clavicle. On Nov. 21st, after the patient had been put under the influence of chloroform, Sir Henry applied two stout india-rubber ligatures across and around the base of breast, after the manner recommended by Prof. Dittel, of Vienna, the details of which we gave in our issue of Nov. 29th, 1873. On the day after the operation the skin above the ligatures was blue, and the tissues of the breast very tense. On the 23rd the upper rubber ligature broke.

Nov. 24th.—There was a rise of temperature, and a blush appeared at the inner side of the tumour. The wound was kept clean and free from offensive odour by carbolic-acid irrigation.

The erysipelatous blush in three days extended upwards to the shoulder, but was for a time limited by a line drawn with nitrate of silver. In two days more, however, it had extended over the shoulder and down the back.

On Dec. 1st the ligature round the lower half of the base of the mamma had caused so great a degree of sloughing that it was now lying quite loose, and had to be tightened. On the 3rd the ligature had nearly cut through the lower half of the breast, the surface of division having a grey sloughy appearance. The erysipelas had disappeared.

Dec. 9th.—An india-rubber ligature was placed round the upper half of the breast. On this occasion a shallow cutaneous incision was made for the reception of the ligature.

15th.—The lower ligature came away.

On Dec. 17th the second ligature was tightened; and two days later the pedicle by which the breast was attached was so small that Mr. McLean, the house-surgeon *pro tem.*, divided it with a pair of scissors. The wound thus exposed measured 3½ in. by 2½ in., and was about 1 in. deep.

From this time the progress has been uninterruptedly satisfactory. The wound is healthy and closing rapidly, and the patient's general condition has considerably improved.

WESTMINSTER HOSPITAL.

CASE OF IMPACTED FRACTURE OF THE ANATOMICAL NECK OF THE HUMERUS.

(Under the care of Mr. COWELL.)

THE subject of this rare accident was a girl fourteen years of age, who applied at the hospital with the history of a blow on the shoulder, produced by a fall from a cart. The appearance presented was, in a minor degree, that of dislocation. There was flattening of the deltoid, prominence of the acromion, some loss of mobility, and a good deal of pain. These were accompanied by some swelling around the joint. The house-surgeon, by whom the patient was seen at her first application at the hospital, thought that he once detected some crepitation. The case was treated by a bandage and rest, but, the diagnosis being obscure, the patient was directed to attend on the day of Mr. Cowell's next visit.

The appearance then presented was the same as recorded above, except that the swelling of the joint was said to have increased. No crepitation was perceptible, and Mr. Cowell called attention to the advisability of always avoiding any disturbance of the parts, since, while crepitation was not generally essential to the diagnosis of fracture, much damage might be done by dislocating an impaction. At first sight this case might be one of partial dislocation, fracture of the glenoid cavity, separation of the epiphysis, or fracture of some portion of the upper end of the humerus, but may be best diagnosed by what is called the negative method—that is, by excluding one injury after another until the possible conditions are reduced to one. First, dislocation is possible, though not probable at the age of this patient; the house-surgeon had already come to the conclusion that none existed, and it was found that the head of the bone could be felt in the glenoid cavity, where it rotated with rotation of the arm. This latter fact showed also that there was no dislocation of the epiphysis—an accident much more likely to happen at the age of this patient,—and no fracture of the surgical neck of the humerus. The absence of any dislocation is further proved by measurement with a tape carried under the axilla and vertically over the acromion process, for the measurement was found the same in both shoulders. There was no fracture of the glenoid cavity, for no displacement could be felt, and no crepitation could be perceived on pressing the humerus upwards against the acromion; besides, the external violence had not apparently been sufficient to produce such a fracture. There remains only one condition possible—for the deformity is inconsistent with no lesion at all,—and that is fracture of the anatomical neck of the humerus. This is a rare accident, but doubtless exists in the present case. On careful examination with the finger in the axilla, the seat of fracture may be felt, for there had evidently been a slight displacement, but, fortunately for the patient, there was impaction, and a good recovery will probably be the result. Keeping the arm supported and at rest will be all the treatment required, and the patient will be kept in the hospital in order that her progress may be watched.

LIVERPOOL NORTHERN HOSPITAL.

SINGULAR WOUND IN THE PAROTID REGION PENETRATING THE ORBIT, AND DESTROYING THE SIGHT.

(Under the care of Dr. LOWNDES.)

WILLIAM McC——, aged seventeen, a boiler-scaler, was admitted on the evening of Sept. 7th, 1873, with his right eye partially displaced upon the cheek, and with a lacerated wound, three inches in length, underneath the angle of the jaw, and terminating posteriorly close to the external orifice of the ear. It appeared another man had struck him with his fist a blow on the side of his head, and he had fallen against one of the spikes of an iron railing with such force that it had entered the tissues. The man was then seen to pull the poor fellow's legs from under him, and when he was removed from the railings his eye was found protruding upon the cheek. The eye was reduced to its socket by the house-surgeon, and the wound, which did not bleed much, was dressed with carbolic glycerine.

September 8th.—There is considerable collapse. There is swelling about the angle of the jaw, and the whole cheek and eyelid are much swollen. His sight is entirely gone.

10th.—Pulse 84. Swelling continues with pain. Wound and whole face to be poulticed.

12th.—Free discharge from wound, but still much tension of cheek. Great pain about angle of jaw. Pulse 96. Ordered a grain and a half of calomel and half a grain of opium powder every six hours. Arrowroot and milk diet.

14th.—Much better. Pulse 72.

18th.—Continues to improve. Pulse 64. Conjunctiva rather inflamed; upper eyelid much swollen. Free incisions were made in it with great relief. Pills discontinued.

He has not been able to see in the least with the right eye since admission.

October 30th.—Poultices to the wound still continued; the wound has almost healed. The patient is on ordinary diet, and can use his masticatory muscles without much pain. The muscles of the injured eye seem to have entirely escaped, as its motions follow those of the sound eye in all directions, but its sight is totally gone.

An ophthalmoscopic examination showed detachment to some extent of the retina and enlargement of the papilla.

He was discharged with the wound healed on November 9th, 1873.

From the situation of the wound Dr. Lowndes at first thought the spike must have passed through the floor and cavity of the mouth, and then through the antrum into the orbit; but the progress of the case, the fact that no fluids escaped from the mouth, and the subsequent inflammation of the cheek showed that it must have glanced over the jaw, passed through the parietes of the cheek, and then probably pierced the orbit through the orbital process of the temporal bone.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

MONDAY, DECEMBER 15TH, 1873.

DR. S. O. HABERSHON, F.R.C.P., PRESIDENT, IN THE CHAIR.

MR. BRAINE read the minutes of Dr. Fothergill's paper (read on Dec. 8th), and Dr. WILTSHIRE read the heads of the discussion, which, at the request of the Society, had been published by Dr. Fothergill.

Dr. FOTHERGILL then related the history of two cases of General Paralysis which had occurred in the practice of Dr. Crichton Browne, and in which a cure had resulted from the use of the extract of physostigma. Dr. Fothergill remarked, that physostigma not only lowers the activity of the cardiac ganglia, but also renders them very susceptible to extrinsic impressions; syncope is not uncommon in patients at Wakefield, during their daily walks, while on a course of the bean. No unpleasant consequences have followed as yet. Dr. Forbes, at Shoreditch, has found the bean useful in the treatment of acute mania in its earliest stage. Both aconite and physostigma have powerful antidotes, belladonna and physostigma being antidotal, and digitalis and aconite.

Dr. LAUDER BRUNTON agreed with the views of Dr. Fothergill, but made a few remarks on some points which were only slightly touched upon in the paper. It was difficult to see how purgatives could act as auxiliaries to bloodletting if they only emptied the intestine of its contents by increasing its peristaltic action, as taught by Buckheim and other German authorities. The use of purgatives at once became evident if the view of Moreau and Vulpian, that they increased the intestinal secretion, were adopted. By drawing away part of the fluid constituents of the blood, they diminished the pressure within the vessels in somewhat the same way as bloodletting, though to a less extent. The speaker had repeated Moreau's experiments, and found that sulphate of magnesia injected into the intestine of a cat caused about two-thirds of a drachm of fluid to be secreted in four hours by each inch of the bowel operated on, although the proportion of sulphate was only one grain to an inch. The effect of opium in inflammation was due, he thought, to its action upon the vaso-motor centre, lessening the determination of blood to the inflamed part. Opium weakened or destroyed this effect of a stimulus to sensory nerves, and by thus diminishing the supply of blood to a part, afforded relief, just as raising the hand lessened the pain of an inflamed finger. He considered the beneficial effect of opium in peritonitis to be due to this action, and not merely to its keeping the bowels quiet. Not only was the vascular system capable of being greatly dilated by weakening or destroying the vaso-motor nerves, so that it could then hold more than twice as much as usual, but it could contract so as to keep up the same tension on its contents after they had been reduced by bleeding. Vascular depressants, which dilated the vessels, thus act more powerfully and permanently than venesection. Voit and Bauer had also found that bleeding increases the decomposition of the albuminous tissues, which is already too great in fever, and also lessens the combustion of fat. It thus increases the tendency to fatty degeneration. Aconite, on the contrary, lessened tissue change, for Dr. Meymott Tidy had observed that the tissues of animals poisoned by it retained their irritability for a long time after death, just as in cold-blooded animals, where tissue change goes on slowly. Aconite had thus a double advantage over bleeding, and probably other depressants had a similar effect.

Mr. BRUDENELL CARTER said that the contraction and dilatation of vessels was best demonstrated by the ophthalmoscope. He mentioned the case of a lad at present under his care, in whom there was spontaneous pulsation of the retinal arteries. He suspected cardiac mischief, but none was found. The sphygmograph showed a high degree of arterial tension—that is, a general narrowing of the bloodvessels; and thus the boy's retina is being starved, and the boy's vision is rapidly failing.

Dr. SANSOM said that as in the investigation of disease objective were better than subjective signs, so in the investigation of remedies experimental data were better than opinions. The old therapeutics had rested too heavily on mere opinions, and even now there were probably many agents empirically employed which were destined to share the fate of the pulverised lizards and decoctions of cerebral substance of ancient days. He could not, without close scrutiny of the data, accept the conclusion that modern medicine was practically less successful than the ancient. Most probably, from the advance in diagnosis, cases described as fever, croup, &c., in one epoch differed widely from those described in the other. Dr. Fothergill on one point might have unintentionally produced an erroneous impression. He had spoken of a condition of narcotism as produced by a venous reflux with secondary arterial contraction, thence resulted cerebral anæmia. It might be interpreted that in his opinion this was the explanation of the production of narcosis generally. Dr. Sansom considered that narcotism might be caused by the obstruction of the cerebral arterioles at the periphery, as when blocked by emboli or foreign bodies, or by active contraction of the arterioles, whereby the supply of blood was checked, or by dilatation of the arterioles, whereby the blood-current was slowed. He had observed that the early action of anæsthetics was to contract the arteries. This was constant in the case of all anæsthetics discovered. Subsequently, however, and this more especially in the case of chloroform, dilatation occurred, whereby the blood-current was slowed. In narcotism therefore the conditions varied; there might be arterial contraction, just as in the case of congelation, or dilatation, as in the advanced stages of chloroform anæsthesia; but there was one dominant circumstance—the imperfect supply of arterialised blood.

Dr. Crisp, Dr. Broadbent, and Dr. Theodore Williams also joined in the discussion.

Dr. FOTHERGILL then replied, and, having answered the various questions asked, stated his belief that the veins themselves possess contractile power, more especially those valveless veins of the portal system.

PATHOLOGICAL SOCIETY OF LONDON.

TUESDAY, DECEMBER 16TH, 1873.

SIR W. JENNER, BART., K.C.B., PRESIDENT, IN THE CHAIR.

DR. F. TAYLOR showed a specimen of Leucocythæmia with Lymphadenoma from a boy aged twelve. He had been well till five weeks ago, when œdema of the lower limbs and face was noticed. He had had scarlet and rheumatic fever. The spleen was much enlarged, reaching to within two inches of the umbilicus. The glands in the axilla were enlarged. The number of white corpuscles in the blood was increased. The heart and lungs were normal. The temperature was high, varying from 100° to 102°. Dropsy and purpura supervened, and he died. The spleen weighed 51 oz.; the glands throughout the body were enlarged; in the liver leucocythæmic tissue was found.

The PRESIDENT said that in leucocythæmia the spleen was enlarged and the temperature was always raised; in Hodgkin's disease there was no elevation of temperature.

Mr. CRIPPS showed a Spleen and Lymphatic Glands from

a case of Adenoid disease. The spleen weighed 9¼ oz.; the glands removed from the body weighed 5¼ lb. The glands of the axilla were enlarged, and the alar thoracic artery was much increased in size. The specimens were taken from the body of a woman brought into the dissecting-room. The blood had not been examined. She had been a patient at the Brompton Hospital some time ago, and died of dropsy and disease of the right lung.

Dr. CRISP thought the enlargement of the spleen depended upon great muscular effort, and referred to cases as illustrating this.

Dr. CRISP exhibited a specimen of Imperfect Rectum. A male child was born at term; there was no motion of the bowels. The abdomen was distended; the anus perforate, but the intestine distended above. The rectum was found to end in a cul de sac. Dr. Crisp referred to the statistics of cases he had drawn up in his Jacksonian Prize Essay, and on which operations had been performed. Boys were more liable than girls to this malformation.

Mr. FAIRLIE CLARKE said he had seen three similar cases, and only one was a female. The inquiries he had made confirmed what Dr. Crisp had said, that the malformation was twice as common in boys as in girls.

Mr. JOHN WOOD said that not only malformations of the anus and rectum, but also those of the bladder were more common in males than in females. Out of fifty or sixty cases he had met with only six females.

Mr. MORRIS referred to a case he had operated upon successfully in Middlesex Hospital. A girl, three months old, passed the fæces through an opening in the vagina.

Dr. CAYLEY showed some microscopical specimens of a Psammoma of the Dura Mater. A woman, aged fifty-seven, died of capillary bronchitis. She had been subject to epistaxis, and had had hemiplegia of the left side, but not very marked. At the post-mortem examination a tumour the size of a pea was found attached to the dura mater near the optic foramen. An apoplectic clot was found in the optic thalamus. The section under the microscope showed fibrous bands with vessels and round bodies of concentric rings calcified. The nature of these bodies was doubtful. Cornil and Ranvier thought them epithelial cells arranged edgewise in the bloodvessels; they looked to him more like calcified fibrine.

Mr. GODLEE showed two specimens of Loose Ossifying Enchondromata in the neighbourhood of a Pedunculated Exostosis; the latter was an ordinary pedunculated exostosis growing from the upper end of the tibia of a boy eleven years of age, showing the usual internal layer of cartilage, internal cancellous bone, and intermediate dense ossifying layer. The interest of the case rested in the presence of the two smaller growths, one the size of a pea, the other three times the size, both freely movable. They could not be taken from the wound made in removing the exostosis till a dense fibrous membrane had been divided, and were possibly connected with the sheath of the tendon of the semi-membranosus. A section of the smallest showed it to be made of hyaline cartilage, surrounded by a fibrous capsule from which a centre of ossification projected into the interior. The condition was believed to be uncommon, and the mode of development difficult to account for.

Mr. GODLEE then showed a specimen of Peri-, Endo-, and Myo-carditis, occurring during septicæmia following a whitlow. The heart was taken from a patient, aged thirty, a carpenter, who sixteen days before his death cut his finger while making a cornice of block tin. A thecal abscess followed, which was treated by incision and poulticing under Mr. Beck, at University College Hospital. The local symptoms improved, but a grave constitutional condition came on, the temperature rising to 103°, and afterwards to 104°, with a pulse of 100, and very dry tongue. A large abscess developed in the lower part of the right thigh, and at last a loud friction murmur was heard over the heart. On Dec. 6th chloroform was administered, the patient bearing it well, and the abscess was opened. In the evening of the same day he became delirious and died. At the autopsy some fluid was found in the right pleura; both lungs were congested, and the right in part collapsed. The pericardium was rough and gritty, and contained two ounces of dirty, almost purulent, fluid. The valves of the heart were red, partly from post-mortem staining, but enlarged vessels were seen by the aid of a lens. The muscular substance had lost its red colour, was pale-brown, in some places almost yellow, mottled with lighter patches; near the apex, on the side of the left ventricle, and in some of the columnæ carneæ it had broken down into a pulpy mass, in which were small hæmorrhages. Under the microscope the fibres were granular, breaking up into short fragments, fatty corpuscles, and granular débris; between the fibres a marked development of new cells and a swelling of the connective tissue were noticed. Though the disease must have been in existence for some days, there was no pain or dyspnœa till shortly before death. The pulse, though small, was not very frequent, and never irregular. Not the least interesting feature of the case was the fact that chloroform was administered with perfect safety, and to complete anæsthesia during the last few hours of life.

The PRESIDENT said the specimen was of great interest. The substance of the heart was often damaged without any irregularity of the pulse, as in pericarditis. He thought some of the changes in the muscular substance were post-mortem changes, as the tissue was so much broken down.

Dr. CAYLEY showed a specimen of Cystic Disease of the Kidney removed from a boy four months old. A tense globular tumour, reaching across the umbilicus, was noticed on the right side of the abdomen. It was supposed to be a hydatid tumour, and was punctured, and four ounces of a chocolate-coloured fluid were drawn off. After a time the puncture was repeated, and later it was punctured in four places, and fluid of the same kind was drawn off. The tumour enlarged, and the child died of marasmus. The right kidney was found to be cystic, and thirty-two ounces of fluid exuded. The urine was normal.

Mr. DE MORGAN showed a Spike from an area railing which had entered the thorax and perforated the lung of a man. He had been called to see him on his way to the Society. He withdrew the spike, and closed the opening with lint steeped in collodion. It had entered the chest four inches and a half. The man's respiration was hurried, and the pulse 136.

Mr. DE MORGAN also showed a good specimen of Enchondroma of the Tibia, which he had removed from a young married woman. She had been healthy till after her confinement in 1871; then the leg in which the tumour developed began to swell. It subsided after a time, and then again became swollen, and by rest it regained its natural size. In March it again enlarged very rapidly, and the patient had a cachectic look. The specimen differed from that ordinarily seen, being made up of a number of small nodules distinct from each other. The tumour was situated in the upper part of the tibia.

Mr. J. ADAMS exhibited a peculiar Deformity of the Knee-joint, also drawings of the limb taken during life. The patient, a man, suffered from chronic arthritis. A short time before death he fell, and fractured the patella transversely. He died from suppuration of the lymphatic glands.

Reviews and Notices of Books.

The Anatomist's Vade-Mecum. By ERASMUS WILSON, F.R.S. Edited by GEORGE BUCHANAN, M.D., Surgeon and Lecturer on Clinical Surgery at the Glasgow Royal Infirmary, and Professor of Anatomy in Anderson's University. Assisted by HENRY E. CLARK, M.R.C.S. Ninth Edition. London: J. and A. Churchill. 1873.

Surgical Anatomy. By EDWARD BELLAMY, F.R.C.S., Senior Assistant-Surgeon to Charing-cross Hospital, and Teacher of Operative Surgery in the Medical School of Charing-cross Hospital. London: J. and A. Churchill. 1873.

THERE is reason to fear that the study of practical anatomy—that is, anatomy which is subservient to surgery—is not cultivated to its proper extent in this country. Numerous deterring influences exist, chief among which are the scanty supply of bodies for dissection and the want of proper text-books. With the exception of the anatomical works of Gray and of Heath, there are few books in the English language which can be said to make anatomy of surgical interest. An accurate and extensive knowledge of

both human and comparative anatomy is necessary to the physiologist and the pathologist, but to the majority of students and practitioners only such an acquaintance with the construction of the body is required as will aid them in the diagnosis and the treatment of disease.

Wilson's Anatomy was long a popular work with students, and the fact that it has now reached a ninth edition relieves us from the necessity of noticing it at any length. For some time the work has been out of print. The ninth edition has undoubtedly undergone considerable revision at the hands of Prof. Buchanan and Mr. Henry E. Clark, and has *pro tanto* been improved. Many fresh woodcuts and much new material have been added; but we can hardly say that the book has in every particular been brought up to the present day. For instance, no mention is made of Bigelow's recent observations on dislocation of the hip-joint, the ilio-femoral ligament being dismissed in four lines. We may further remark that it seems almost useless to give drawings of the bones without at the same time showing the attachments of the muscles to them. With the exception of these faults, the book will be found useful and, on the whole, reliable.

Of Mr. Bellamy's work on Surgical Anatomy it is our duty to speak at greater length. The subject of surgical anatomy has been greatly neglected in this country. English literature does not possess many works on the subject, and most of what has been written is to be found at the end of systematic works on anatomy, or irregularly scattered in treatises on operative surgery. Until the appearance of an English translation, by Mr. J. C. Galton, of Professor Roser's Manual of Surgical Anatomy, no systematic treatise on the subject existed in our language. The appearance of Mr. Bellamy's work is a sufficient proof, however, that a gap was still left open in this direction.

In his introduction the author recommends the student to make a "most careful inspection of the body as a whole, before he attempts the more minute and detailed examination of its various parts. For this purpose both the living model and the dead subject should be examined together. For such examination the body should be lying down—in fact, in the position in which a patient would be placed for a surgical examination or operation. By the side of the body should be placed an entire articulated skeleton." We think this would be hardly practicable. The subject proper begins with a chapter on the surgical anatomy of the cranial region, in which it is affirmed "that cephalhæmatomata, or blood tumours, occur either from compression of the cranium during parturition or from a collection of blood beneath the pericranium," that the internal table of the skull is more liable to be fractured than the outer, and that the posterior fontanelle is generally closed at birth. Further on it is stated that "fractures of the base of the cranium are generally associated with ecchymosis of the eyelids and effusion of blood from the external auditory meatus." The latter observation may be the result of the author's experience, but it is certainly at variance with the experience of other surgical writers, for these are but occasional signs of fracture of the base of the skull. The escape of blood from the ear in fracture of the base of the skull is fully accounted for by "the close vicinity of the carotid artery and the lateral sinus." The Eustachian tube is said to be "the means of communication between the internal ear and the pharynx." Accurately speaking, our author means, we presume, the middle ear.

The work is, in our judgment, not free from anatomical errors, and in some instances it is difficult to guess at the correct meaning of the sentences. We are told that the naso-pharyngeal region is "situated midway between the nasal fossa and the pharynx." When the author says that the tears may be prevented from passing into the puncta of the canaliculi by eversion of the lid from some cause, such as *ectropion*," we think that he should have stated in what consists the error of the popular opinion that eversion of the lids and ectropion are one and the same thing. We are told that "a *needle passing through the axis of the eyeball* from its anterior surface backwards would traverse successively—(1) the ocular conjunctiva. . . . (12) the three layers of the retina—viz., (*a*) Jacob's membrane (rods and cones); (*b*) the granular layer; (*c*) the fibrous layer." But by what means the needle would reach the layer of rods and cones before the fibrous layer of the retina is not stated. The book improves in the chapters succeeding the first; but these are not free from some blemishes that characterise the first chapter. The only origin given of the internal oblique is the lumbar aponeurosis. The transversalis muscle is described as arising from the lower ribs and the lumbar aponeurosis only, and is said to be "inserted along the linea alba and by the conjoined tendon, the upper three-fourths passing behind the rectus, and blending with the tendon of the internal oblique, whilst its lower fourth passes in front of it." The internal mammary artery "enters the rectus below the cartilages of the eighth or ninth rib." The umbilicus is stated to be "the cicatrix of a fœtal structure of the umbilical cord, which, having been cut or tied at birth, has shrunk up to its attachment at the abdominal parietes." In making the statement that "the lower chain of lymphatic ganglia in the axis of the thigh and the glands are those which become enlarged in ulcers or injuries of the lower limb," we think that the author should have explained the difference which he attaches to the meaning of ganglia and glands. As another example of the looseness of description we may give the following:—"The course taken by this vessel (common iliac) with regard to the surface of the body is from a point to the left of the umbilicus, and in a line with the iliac crests and the centre of Poupart's ligament."

The Quarterly Journal of Microscopical Science. Edited by Dr. PAYNE, Mr. LANKESTER, and Professor THISELTON DYER. Vol. XIII. London: J. & A. Churchill. 1873.

THE present volume of this valuable journal may fairly claim to take rank with Max Schultze's *Archiv für Microscopische Anatomie* in the number, variety, and importance of the original papers it contains. We say this advisedly, for, on examining the several articles, we find there are seven devoted to comparative anatomy, four to histology, seven to subjects more or less bearing on vegetable physiology and organography, five to development; whilst there are five long translations from Italian or German writings, and a vast amount of information in the form of notes, accounts of the proceedings of Societies, and a Quarterly Chronicle of Microscopical Science. Amongst the more important essays to which we may call attention are:—First, "A Contribution to the history of the Polyzoa," by the Rev. Thomas Hincks, having reference chiefly to the germ-capsule and the development of the ova in these animals, but also demonstrating clearly the presence of a nervous system in the Cheilostomata. Secondly, a paper by Prof. Allman "On the Homology of the Gonangium in the Genus Halecium, one of the Hydroid Polypes," showing that it is not a modified hydrotheca, but a modified segment of the ileum. Thirdly, Prof. Panceri gives an interesting account of the Luminous Nerve-cells of Phyllarhœ bucephala. Fourthly, Mr. Edwin Newton's description of the Structure of the Eye of the Lobster. Fifthly, Mr. Lankester's account of Blue Stentorin.

Amongst the translations we notice that of the valuable paper by Wittrock on the Freshwater Algæ of Gotland and Oland (islands in the North Sea); Ranvier's researches on

the Connective Tissue and Vessels of the Nerves; Schmitz' account of the Formation of Auxospores in Cocconema cistula; Cohn's investigations on the Bacteria; Schwendener's discussion on the nature of the Gonidia of Lichens; all of which, but especially the last, are interesting and important. Schwendener's view, which he argues with much ability, is to the effect that lichens are not independent plants, but ascomycetous fungi, to which certain unicellular or filamentous fungi serve as host plants. Lastly, Heilzmann's Researches on the Structure of Bone and Cartilage.

The papers on Development include one by Mr. Balfour, of Trinity College, Cambridge, and embrace the early stages of development in the chick. The investigations have been carried on in the physiological laboratory at Cambridge with Dr. Foster's assistance, and appear to have been carefully pursued. Another paper on this subject has been contributed by Professor Lister, having reference to the natural history of bacteria and their relation to the germ theory of fermentative changes.

No less than twenty-three plates are occupied with illustrations of the papers.

The new management under which this journal has fallen has clearly been of great service to it, and we cordially wish it success.

OUR LIBRARY TABLE.

The Home of the Agricultural Labourer; its Defects, and how to remedy them. By FRANCIS T. BOND, B.A., M.D. Lond. London: Simpkin, Marshall, and Co.—The medical officer of health to the Gloucester Union of sanitary authorities has embodied considerable study of the hygiene of the agricultural districts in this little volume. He shows very clearly that all sanitary defects in the houses of the poor have their origin in insufficiency, both as to quality and quantity, of dwelling accommodation. In the rural districts this deficiency cannot be met by the ordinary working of supply and demand; while the increasing delapidation of such house property raises a most serious problem, not only in a sanitary, but in a moral, social, and political point of view. Dr. Bond's remedy is this: to include houses for the accommodation of the labouring class in the permanent sanitary improvements which rural sanitary authorities are empowered to carry out, and to give the same facilities for effecting such improvements as now exist in the case of works for drainage, water-supply, and other purposes of the kind. The illustration of the working of this remedy, down to its minutest details, occupies the remainder of Dr. Bond's essay, which we strongly recommend to all interested in that momentous problem—the public health.

Manual of Comparative Anatomy and Physiology. By S. MESSENGER BRADLEY, F.R.C.S. &c. Second Edition. London: Simpkin, Marshall, and Co. 1874.—The first edition of this work was small and unpretending, and it supplied a want, and we are not sure that our author has done wisely in enlarging it and altering its character in the way he has done. The bigger the book the greater the room for errors, and this one is not by any means free from "slips"; in fact, it is an exceedingly difficult matter to supply the student with a really efficient and, throughout, reliable text-book on so large a subject.

Popular Lectures on Scientific Subjects. By H. HELMHOLTZ. Translated by E. ATKINSON, Ph.D., F.C.S. With an Introduction by Professor TYNDALL. London: Longmans, Green, and Co. 1873.—As Professor Tyndall says, the reputation of Helmholtz, even among those whose education has been mainly literary, is so great as to render it almost superfluous to remark that the intellectual nutriment here offered is of the very first quality. The volume contains a series of lectures by a master in science on topics that compel the attention of thoughtful men and those who have any pretence to be considered well educated. The translation by Dr. Atkinson and a scientific staff co-operating with him, specially qualified by their knowledge of the respective subjects undertaken by them, has been most ably done. We have ourselves read several of these lectures with uncommon interest, and we doubt not that any one with ordinary intelligence and education could do the same, for the subjects are as perspicuously treated as the nature of them admits.

Camp Notes: Stories of Sport and Adventure in Asia, Africa, and America. By FREDERICK BOYLE. London: Chapman and Hall.—A most entertaining book of stories and adventures, in which truth and fiction are so blended that the impression conveyed at times is very perplexing. Mr. Boyle is well known as an intrepid traveller, and we have no difficulty in believing that many of the stories are in the main true. The first part of the book is chiefly devoted to the sayings and doings of three pleasant gentlemen, who unite a love of sleeping in the open with great proficiency in the use of lethal weapons. Indeed, in the words of one of them, they had been "suckled on six-shooters and vaccinated with bowie-knives." The latter half of the book contains much interesting information, ethnological and geographical, of the countries the author has traversed. No one taking up the book will lay it aside without finishing it.

Collins's Advanced Science Series. Physical Geography. By JOHN YOUNG, M.D., L.R.C.S., &c. London and Glasgow: William Collins, Sons, and Co. 1874.—A capital book, containing a large amount of well-arranged information from the most various, latest, and best sources, on the anatomy and physiology of the earth—to adopt M. Guyot's expression of physical geography.

A History of English Literature for Junior Classes. By FREDERICK A. LAING. London and Glasgow: Collins.—The work under notice is well adapted for a simple and easy text-book of literature for junior pupils. A short sketch is given of most of the great English authors, from Chaucer down to the present time, including a short analysis and example from the principal work of each writer. The book is likely to become popular.

REPORT
OF
The Lancet Sanitary Commission
ON THE
OUTBREAK OF TYPHOID FEVER AT CAMBRIDGE.

CAMBRIDGE, during the later months of the past year, suffered from an epidemic of typhoid fever, which created considerable anxiety from its spread among the undergraduates of the University and among the more influential residents of the town. As this outbreak presents features of great interest, we purpose giving a few details as to the origin and the causes of the subsequent spread of the fever.

Nearly every autumn typhoid fever is more or less prevalent in Cambridge, but for many years past has been chiefly confined to the poorer and out-lying districts of the town, isolated cases being only occasionally reported as occurring at the different colleges. Never since 1851, however, has there been a decided outbreak.

The present epidemic began about the end of July, coincident with the opening of a drain connected with an old cesspool at Barnwell, Dr. Paget admitting at that time a considerable number of cases of typhoid into Addenbrooke's Hospital. These cases, which occurred entirely among youths living in the neighbourhood of the drain in question, were of a mild nature, and all recovered. The man, however, who opened the drain is reported to have died of the fever. About the end of September and beginning of October several cases occurred in the neighbourhood of Benet-street and King's-parade, and early in November broke out in Caius College. At this time the fever was spread generally over the town, and attained its maximum intensity. In December very few fresh cases occurred, and these were of a milder type. At the present time the epidemic appears to have ceased. The mortality does not seem to have been great: Dr. Paget states (as his belief) that since the beginning of the epidemic of enteric fever in July last to the present time the total number of deaths has not exceeded ten or a dozen.

The outbreak at Caius College has attracted particular attention from the fact that the fever was limited to the newer portion of the college, and from three of the cases having terminated fatally. As statements condemning strongly the sanitary arrangements of the college have appeared, we made an especial inquiry into this point. The result of our inquiry shows that the statements made regarding the sanitary deficiencies have been exaggerated. The arrangements equal those of most, and are superior to many of the colleges. Moreover in the two oldest courts of the college, where most exception could be taken, no cases of fever occurred; whilst in the new buildings, where the arrangements are good, the outbreak took place. We believe the localisation of the poison in this part of the building is due to a leakage from the main drain outside the college, under the foundations, and their consequent saturation with sewage-matter, the gases passing up through the basement into the chambers. Caius College is a quadrilateral building, surrounded on three of its sides by an old brick drain, which comes from [illegible] down King's-parade, and passes Caius [illegible]lane, and Trinity-hall-lane. The [illegible]nity-street portion of the dra[illegible]'s that in making the fo[illegible]en opened, or the [illegible] college drains with [illegible]here the drainage [illegible]thesis.

[illegible]in their power to [illegible]ave had a special [illegible] subject made for [illegible], at once be fol[illegible] question. Lastly, [illegible] is derived from the t[illegible]pply, and is not collec[illegible]

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the Connective Tissue and Vessels of the Nerves; Schmitz' account of the Formation of Auxospores in Cocconema cistula; Cohn's investigations on the Bacteria; Schwendener's discussion on the nature of the Gonidia of Lichens; all of which, but especially the last, are interesting and important. Schwendener's view, which he argues with much ability, is to the effect that lichens are not independent plants, but ascomycetous fungi, to which certain unicellular or filamentous fungi serve as host plants. Lastly, Heilzmann's Researches on the Structure of Bone and Cartilage.

The papers on Development include one by Mr. Balfour, of Trinity College, Cambridge, and embrace the early stages of development in the chick. The investigations have been carried on in the physiological laboratory at Cambridge with Dr. Foster's assistance, and appear to have been carefully pursued. Another paper on this subject has been contributed by Professor Lister, having reference to the natural history of bacteria and their relation to the germ theory of fermentative changes.

No less than twenty-three plates are occupied with illustrations of the papers.

The new management under which this journal has fallen has clearly been of great service to it, and we cordially wish it success.

OUR LIBRARY TABLE.

The Home of the Agricultural Labourer; its Defects, and how to remedy them. By FRANCIS T. BOND, B.A., M.D. Lond. London: Simpkin, Marshall, and Co.—The medical officer of health to the Gloucester Union of sanitary authorities has embodied considerable study of the hygiene of the agricultural districts in this little volume. He shows very clearly that all sanitary defects in the houses of the poor have their origin in insufficiency, both as to quality and quantity, of dwelling accommodation. In the rural districts this deficiency cannot be met by the ordinary working of supply and demand; while the increasing delapidation of such house property raises a most serious problem, not only in a sanitary, but in a moral, social, and political point of view. Dr. Bond's remedy is this: to include houses for the accommodation of the labouring class in the permanent sanitary improvements which rural sanitary authorities are empowered to carry out, and to give the same facilities for effecting such improvements as now exist in the case of works for drainage, water-supply, and other purposes of the kind. The illustration of the working of this remedy, down to its minutest details, occupies the remainder of Dr. Bond's essay, which we strongly recommend to all interested in that momentous problem—the public health.

Manual of Comparative Anatomy and Physiology. By S. MESSENGER BRADLEY, F.R.C.S. &c. Second Edition. London: Simpkin, Marshall, and Co. 1874.—The first edition of this work was small and unpretending, and it supplied a want, and we are not sure that our author has done wisely in enlarging it and altering its character in the way he has done. The bigger the book the greater the room for errors, and this one is not by any means free from "slips"; in fact, it is an exceedingly difficult matter to supply the student with a really efficient and, throughout, reliable text-book on so large a subject.

Popular Lectures on Scientific Subjects. By H. HELMHOLTZ. Translated by E. ATKINSON, Ph.D., F.C.S. With an Introduction by Professor TYNDALL. London: Longmans, Green, and Co. 1873.—As Professor Tyndall says, the reputation of Helmholtz, even among those whose education has been mainly literary, is so great as to render it almost superfluous to remark that the intellectual nutriment here offered is of the very first quality. The volume contains a series of lectures by a master in science on topics that compel the attention of thoughtful men and those who have any pretence to be considered well educated. The translation by Dr. Atkinson and a scientific staff co-operating with him, specially qualified by their knowledge of the respective subjects undertaken by them, has been most ably done. We have ourselves read several of these lectures with uncommon interest, and we doubt not that any one with ordinary intelligence and education could do the same, for the subjects are as perspicuously treated as the nature of them admits.

Camp Notes: Stories of Sport and Adventure in Asia, Africa, and America. By FREDERICK BOYLE. London: Chapman and Hall.—A most entertaining book of stories and adventures, in which truth and fiction are so blended that the impression conveyed at times is very perplexing. Mr. Boyle is well known as an intrepid traveller, and we have no difficulty in believing that many of the stories are in the main true. The first part of the book is chiefly devoted to the sayings and doings of three pleasant gentlemen, who unite a love of sleeping in the open with great proficiency in the use of lethal weapons. Indeed, in the words of one of them, they had been "suckled on six-shooters and vaccinated with bowie-knives." The latter half of the book contains much interesting information, ethnological and geographical, of the countries the author has traversed. No one taking up the book will lay it aside without finishing it.

Collins's Advanced Science Series. Physical Geography. By JOHN YOUNG, M.D., L.R.C.S., &c. London and Glasgow: William Collins, Sons, and Co. 1874.—A capital book, containing a large amount of well-arranged information from the most various, latest, and best sources, on the anatomy and physiology of the earth—to adopt M. Guyot's expression of physical geography.

A History of English Literature for Junior Classes. By FREDERICK A. LAING. London and Glasgow: Collins.—The work under notice is well adapted for a simple and easy text-book of literature for junior pupils. A short sketch is given of most of the great English authors, from Chaucer down to the present time, including a short analysis and example from the principal work of each writer. The book is likely to become popular.

REPORT
OF
The Lancet Sanitary Commission
ON THE
OUTBREAK OF TYPHOID FEVER AT CAMBRIDGE.

CAMBRIDGE, during the later months of the past year, suffered from an epidemic of typhoid fever, which created considerable anxiety from its spread among the undergraduates of the University and among the more influential residents of the town. As this outbreak presents features of great interest, we purpose giving a few details as to the origin and the causes of the subsequent spread of the fever.

Nearly every autumn typhoid fever is more or less prevalent in Cambridge, but for many years past has been chiefly confined to the poorer and out-lying districts of the town, isolated cases being only occasionally reported as occurring at the different colleges. Never since 1851, however, has there been a decided outbreak.

The present epidemic began about the end of July, coincident with the opening of a drain connected with an old cesspool at Barnwell, Dr. Paget admitting at that time a considerable number of cases of typhoid into Addenbrooke's Hospital. These cases, which occurred entirely among youths living in the neighbourhood of the drain in question, were of a mild nature, and all recovered. The man, however, who opened the drain is reported to have died of the fever. About the end of September and beginning of October several cases occurred in the neighbourhood of Benet-street and King's-parade, and early in November broke out in Caius College. At this time the fever was spread generally over the town, and attained its maximum intensity. In December very few fresh cases occurred, and these were of a milder type. At the present time the epidemic appears to have ceased. The mortality does not seem to have been great: Dr. Paget states (as his belief) that since the beginning of the epidemic of enteric fever in July last to the present time the total number of deaths has not exceeded ten or a dozen.

The outbreak at Caius College has attracted particular attention from the fact that the fever was limited to the newer portion of the college, and from three of the cases having terminated fatally. As statements condemning strongly the sanitary arrangements of the college have appeared, we made an especial inquiry into this point. The result of our inquiry shows that the statements made regarding the sanitary deficiencies have been exaggerated. The arrangements equal those of most, and are superior to many of the colleges. Moreover in the two oldest courts of the college, where most exception could be taken, no cases of fever occurred; whilst in the new buildings, where the arrangements are good, the outbreak took place. We believe the localisation of the poison in this part of the building is due to a leakage from the main drain outside the college, under the foundations, and their consequent saturation with sewage-matter, the gases passing up through the basement into the chambers. Caius College is a quadrilateral building, surrounded on three of its sides by an old brick drain, which comes from Benet-street, down King's-parade, and passes Caius in Trinity-street, Trinity-lane, and Trinity-hall-lane. The new buildings abut on the Trinity-street portion of the drain, and it is more than probable that in making the foundations this drain may have been opened, or the masons may have failed to connect the college drains with it. The immunity of the old buildings, where the drainage has not been disturbed, favours this hypothesis.

The College authorities are doing all in their power to discover the origin of the evil; they have had a special report by a competent authority on the subject made for them. Our suggestion will, we hope, at once be followed by an examination of the drains in question. Lastly, we ought to state that the water-supply is derived from the town water-works, is continuous in supply, and is not collected in any cistern or reservoir.

With regard to the cases occurring in the town, the spread of the disease is probably attributable to the escape of sewage-matter and gases into the wells and the basement of the houses. The system of drainage is most defective and inefficient. The main drains are all of brick; there is absolutely no ventilation of these sewers! their outfalls are below the surface of the river, and the means of flushing them totally inadequate. Consequently, owing to the difficulty of obtaining any fall,* the sewage-matter is deposited in deep layers in the interior, and, instead of a drain, we have an "elongated cesspool." Whenever a leakage occurs, which with a brick drain is inevitable, it is easy to perceive what a flood of sewage will soak out into the porous soil. It is important the inhabitants of Cambridge should clearly understand the urgency of this question, for many regard the contamination of the river as the sole source of evil, and completely overlook the defective condition of the main drainage.

All the brick drains must be abolished without delay, and earthenware pipes substituted, an efficient system of ventilation adopted, and the water from the town waterworks,* which is excellent in quality and abundant in supply, laid on in all the houses. Then the authorities can consider what scheme they will adopt for the ultimate disposal of their sewage.

Unfortunately, the Improvement Commissioners are at present unable to proceed, being encumbered with an Act passed in the reign of George III., 1794. This Act limits them to a fifteenpenny rate, out of which, except a small sum obtained from tolls, they have to provide for the lighting, paving, draining, and other improvements—an income utterly insufficient. An application to increase their powers has just fallen through owing to a disagreement with the University in respect to the licensing of places of entertainment. It is intolerable that sanitary improvements should be delayed by such irrelevant matter. The Local Government Board has addressed a letter to them on the subject, which we hope will lead to immediate action.

Lastly, a health officer should be appointed forthwith. It is reasonable to suppose if such an officer had been in existence a note of warning would have been given to the college authorities early in the term, and precautions taken to prevent the spread of the disease by closing the wells, flushing and disinfecting the drains, securing weak points against the irruption of sewage matter, and repairing any defective traps. Whilst on this topic we would suggest that the University might endow a Chair of State Medicine, and the occupant act as medical officer to the town.

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can be little doubt that, if Sir Garnet had been backed by a reliable native force, or by the body of warlike natives with Glover's force, the Ashantee army might have been entirely routed after the affair of Abrakrampa. Everyone now feels that whatever is to be done must be done by ourselves. It is, therefore, easy to understand the anxiety with which the arrival of the European regiments is awaited. The time is short, for every soldier must be out of the country by the end of March. After the first heavy rains the Prah becomes swollen, and the ground in its vicinity gets swampy, impassable, and most unhealthy. The Abrakrampa march has resulted in a good deal of sickness, and a considerable number of the men who took part in it are in the hospital at Conor's-hill. Much sickness prevails generally, among the new-comers especially. Four army surgeons were, by the last accounts, ailing at Cape Coast Castle, and three went away in the *Simoom*. Surg. Sandford Moore has been suffering from dysentery, and will be invalided. Deputy Surgeon-General Home and Dr. M'Nalty have their hands full, and they are indefatigable in their exertions. The doctors appear to adhere to their original estimate—viz., that the amount of inefficiency from aguish fevers will be large, but the percentage of mortality small, and the amount of invaliding will mainly depend upon the presence or absence of wet: if the former, cases of dysentery will be rife. Everything depends on the regiments being rapidly marched to the advanced posts, where the climate is relatively cool and healthy.

Sir Garnet has perfectly recovered, and had gone up to the front to make a final inspection of the arrangements along the line of march before the arrival of the troops. We are glad to ascertain that the General is accompanied by Dr. Home, who will, no doubt, be fully alive to the necessity of guarding his health and preventing over-exertion. It is reassuring to learn on all hands that the arrangements for the advance of the European troops are considered admirable. A camp has been formed every ten miles in healthy localities, with good water-supply near. Large bamboo huts have been erected and thatched with palm leaves and guinea grass. These bamboo huts would, from the description that has been given of them, satisfy even Mr. Rawlinson. They are fairly raised above the ground, the walls being formed of pieces of split bamboo passed horizontally along, and interwoven with, a strong frame-work of vertically placed bamboo poles. At Conor's camp the hut erected by Captain Crease (the inventor, by the way, of the excellent filter known by his name) is 30 ft. long by 15 ft. wide. It is thatched, and quite water-tight. The description given by the correspondent of the *Standard* of these arrangements corresponds very closely with that which has been furnished us. The sides of Captain Crease's huts are made of matting, all or any part of which can be lifted outwards so as to form a verandah, and allow a free current of air into the hut. Above these mats there is a space of two feet upon the eaves. This is lightly wattled, so as to allow plenty of ventilation at night. Upon each side of the hut are six beds, made of bamboo. Above the mat walls a shelf runs round the hut, giving the men an ample place for their kits and haversacks. The church in this town has been prepared for a hospital. Felt has been stretched over the roof, and whitewashed to abate the heat, and the whole interior has been thoroughly cleaned. Twenty-two beds only have been placed in it, and this gives an abundance of space for each. The place is fitted up with small cupboards for the patients. The position it occupies is very good. It stands quite opposite to the entrance to the castle, and its windows face the breezes as they come off the sea. Indeed, when service was going on, before the conversion of the church, the draught was almost too much at times. The hospital will be very useful even after the hospital ships arrive here. Sick men as they are brought down in hammocks can be brought in here and laid down in the cool and quiet, until, when evening comes, they can be taken off in a body to the hospital ship.

DONATIONS, &c., TO MEDICAL CHARITIES.—The Cancer Hospital, Brompton, has received £1000 from "G. M. E." The Queen Charlotte Lying-in Hospital has received £1000 from "C. H." The Royal Hospital for Incurables has received £1000 from "R. G. Y." The Samaritan Free Hospital for Women and Children has received £1000 from "E. F. H."

Foreign Gleanings.

THE WHOLE UPPER EXTREMITY AND SCAPULA WRENCHED OFF; RECOVERY.

THIS case is related by Dr. Katholitzky in the *Allg. Wiener Med. Zeit.* (November 11th, 1873). The patient, a bricklayer thirty-seven years of age, was engaged, on May 27th, 1871, at Rossitz, Moravia, in walling up a shaft forty-seven yards in depth. He was in the act of moving on a trough with the left hand whilst supporting himself against part of the scaffolding with the right hand, when the bucket, rapidly raised by steam up the shaft to remove the water, caught the poor man, and carried him about one yard to the next cross piece of scaffolding. Here the clothes covering the right clavicular region stopped the ascent, and the patient was thrown to the opposite side of the stage. When his fellow-workmen picked him up they found that the whole of the upper extremity was wanting, and had fallen into the water at the bottom of the shaft. He was immediately taken to the hospital connected with the mining works, and Dr. Katholitzky saw him an hour and a half afterwards. He observed that the whole upper extremity, along with the shoulder-blade, had been wrenched off, and that the hæmorrhage was very inconsiderable. The wound was about ten inches long and eight inches wide, and extended downwards from the acromial end of the clavicle along the right side of the chest. The clavicle was projecting, but covered by integument, and no bleeding or pulsating vessel was discovered after the wounds had been carefully cleansed with warm water. The action of the heart was extremely weak, with eighty pulsations, and the right subclavian artery could hardly be felt. A cavity in the form of a sac was noticed where formerly the scapula had been situated, and the spinous processes of the dorsal vertebræ could easily be seen and felt. A flap of skin the size of a man's hand was hanging down and inclining forwards. Towards the upper part of the wound lay shreds of muscles and nerves; and here, where the brachial plexus had been so rudely divided, the least touch gave exquisite pain, and the patient stated that the whole wound burned like fire.

As the subclavian pulsated but very feebly, and there was no trace of hæmorrhage above the clavicle, and as no arterial ends could be found, the surgeon brought the above-mentioned shreds under the clavicle, and endeavoured to diminish the size of the wound by bringing up the margins and keeping them *in situ* by means of steel clamps. The wound now presented a triangular uncovered surface about the size of a man's hand of small size. Compresses were carefully placed under the clavicle; they were secured by a bandage resting on the sound shoulder, and lint wet with iced water was placed on the open wound.

The patient had such tremendous pain six hours after the accident that he was loudly calling for death. He obtained some relief by means of subcutaneous morphia injections. On the second day the pulse was 110, and still small; temperature 39° C. Various-sized swellings were now noticed in the locality of the scapular muscles, the latissimus dorsi, and the two pectorals; these swellings were extremely tender to the touch, but the state of the lungs was pretty satisfactory. Superficial gangrene occurred on the third day, a solution of carbolic acid being now used. On the eleventh day the gangrenous shreds came off, the two lowermost clamps were removed, and on the fourteenth day the greater part of the wound was closed by first intention. On the twenty-fifth day the wound presented an oval shape, two inches and a half long, and one inch wide. For the next fortnight the progress was extremely slow; hard, fibrous granulations formed, which resisted all ordinary applications. At last Dr. Katholitzky rubbed them with potassa fusa, and seven weeks after the accident the wound was healed.

On the 7th of September—namely, 113 days after this frightful mutilation—the arm was found in the water of the shaft. Decomposition was somewhat advanced, and the scapula broken in various directions, not from the violence of the injury, but from stones and bricks falling into the

lower part of the shaft during the walling of the latter. Nearly all the muscles were torn near their insertions.

The patient was seen two years and five months after the accident, and presented a spinal curvature to the right side, probably owing to the want of equilibrium left after the loss of the right extremity. This curvature began soon after the healing of the wound.

The author thinks that the subclavian and dorsalis scapulæ arteries must have been bent through the violent mechanical injury. Whether the vessels closed by means of a clot or not cannot be clearly made out; they may have become obliterated by lymph exudation, either in the vessel itself, or obtained from the surrounding parts, as Billroth has pointed out. Gradually, says the latter surgeon, this very adhesive lymph gives rise to granulations which finally become adherent to those of the wound. The arterial force was certainly at its lowest ebb immediately after the accident; and hence, as usual, no hæmorrhage. As subsequently the vessels and nerves were carefully placed under the clavicle, the total absence of loss of blood can easily be understood. Dr. Katholitzky thinks a great deal of his steel clamps, which had answered admirably in other cases under his care.

British surgeons will probably notice the simplicity of the treatment, especially as regards stimulants immediately after the accident. In this country the man would have been largely plied with brandy, to counteract the shock, and hæmorrhage would probably have followed such practice. As to the further measures, we find that the patient had only now and then a little wine and water, and made a good recovery in seven weeks. It should, however, be noted that he is said to have always enjoyed good health, though his habits are not mentioned. This case reminds us of the forcible wrenching off of the arm of a woman in Paris, some years ago, during efforts at the reduction of an old dislocation. Here, however, the scapula was not injured.

INTERESTING CASE OF CEREBRAL TUMOUR.

At a late meeting of the Société Médicale des Hôpitaux de Paris, Dr. Ball communicated the above case. The particulars are briefly as follows:—Woman, aged twenty-six; no previous pathological history; intense headache for four months radiating towards nape of neck, returning regularly every three days, and subsiding under the influence of chloroform; slight disorders of deglutition and speech, suggesting the idea of a cerebral tumour; three weeks before death epileptiform seizures and hemiplegia; coma; death. Post-mortem: A tumour as large as a small orange (bergamot) was found seated in the mesial and lateral portion of the right hemisphere; it had brought on a flattening of the lateral convolutions, had pushed aside the corpus striatum and the optic layer, and produced atrophia of the sphenoidal lobe. It consisted in a cystic pouch containing a liquid, and a fleshy tumour of a brownish hue, of lardaceous structure, as large as a small peach, and lying in the fluid, excepting on its internal surface, which adhered to the cerebral tissue. The fleshy tumour was composed of clotted blood, containing hæmatin, hæmoglobin, and bits of nervous fibres. The medulla was slightly atrophied, and there was slight hardening of the white substance. Dr. Ball and the majority of his colleagues concluded that the tumour was an old hæmorrhagic clot. Its slow development explained the absence of symptoms. When it reached the surface of the brain pain supervened, and the epileptiform convulsions were due to its connexion with the investing membranes.

SPONTANEOUS RUPTURE OF OVARIAN CYST.

This case is related by Dr. Lorenzutti, in *Il Morgagni*. The patient, aged sixty-seven, presented a voluminous swelling of the abdomen which had begun six months previously. Thinking it was ascites, Dr. Lorenzutti punctured the abdomen about two months later, and only a few drachms of a gelatinous fluid came away. The case was therefore an ovarian cyst, but the fluid seemed to move about freely in the abdominal cavity. Dr. Menzel (surgeon to the hospital) then performed a second puncture, and the patient died the following day. At the post-mortem the abdomen was found full of a thick, homogeneous fluid mixed with a serous liquid. The peritoneum was red and opaque; there existed adhesions between the intestinal folds and between them and the abdominal walls. There were several cysts of the right ovary, one of which was the size of an orange, whilst others were larger, and seemed to enclose small cysts. There existed, moreover, a membrane which appeared to involve the greater part of the surface of the tumour, and to belong to a cyst which had burst some time before. It is to be observed that the gelatinous matter had not produced sudden peritonitis, and had been contained in the abdomen for at least one month.

ETIOLOGY OF PULMONARY PHTHISIS.

In *Archiv für Experim. Path.*, Heft 3, 1873, Dr. Sommerbrodt has published an article, in which he relates the results of various experiments which he had conducted with the object of showing the connexion which exists between pulmonary phthisis and certain primary affections of the larynx. The following conclusions are drawn from his experiments:—

1. Chronic inflammation of the larynx and upper part of the trachea in rabbits constantly induces pulmonary disease.

2. This disease is totally different from those which manifest themselves usually in rabbits, or which are produced experimentally, and consists in purulent peri-bronchitis, which, as is well known, ultimately brings on destruction of the lung or pulmonary phthisis.

3. Consequently, purulent peri-bronchitis is an intermediate condition between primary ulcers of the larynx and pulmonary phthisis, and this is equally applicable to man.

USE OF HYDRATE OF CHLORAL IN PNEUMONIA.

Dr. Auguste Jansen, a Belgian army surgeon, has recently brought before the Société Centrale du Nord the results of his trials of hydrate of chloral in pneumonia. The drug had obviously been of service, especially in allaying pain, but several of the members argued against Dr. Jansen's view that it had exerted a direct action on the inflammation of the lungs.

CASE OF NEURALGIA OF THE TESTES CURED BY ELECTRICITY.

The patient, a young man free from all syphilitic disease, experienced such intense pain in the testes that he urgently asked Dr. Felippi to perform castration. The case was carefully made out to be neuralgia, independent of any affection of the testicle or of any accumulation of fæcal matter, and in five sittings the patient was entirely cured. Dr. Felippi made use of a weak and direct constant current. —*L'Imparziale*, No. 16, 1873.

THE PATHOLOGY OF THE THYROID GLAND.

In a communication to the Society of Medical Sciences of Lisbon, Dr. Da Silva-Amado made known the results of researches on the above. He had stated the existence of a large proportion of crystals of creatin situated between the glandules, and he had noted besides that whenever there existed a condition of granulo-fatty degeneration in other organs, a similar transformation was always to be observed in the thyroid glandular tissue.

BROMIDE OF POTASSIUM IN GONORRHŒA.

Dr. Martin-Damourette has been very successful with bromide of potassium in certain cases of gonorrhœa. In one instance of recent blennorrhagia attended by most painful erections, the bromide was administered for the purpose of abating the pain and erections, in gradually increasing doses of from half a drachm to eighty grains daily, and the patient was quite well in a week. In two other cases Dr. Martin-Damourette was equally successful in twelve days after the daily administration of one drachm of bromide of potassium with one drachm of tincture of digitalis.

CHRONIC CATARRH OF THE PHARYNX TREATED BY GALVANO-CAUSTICS.

In an article published in *Deutsche Zeitschrift für Chirurgie*, Dr. Carl Michel, of Cœln, advocates the use of galvano-caustics in chronic catarrh of the pharynx. He mentions seventy cases in which he was entirely successful, and in many of which inhalations, cauterisations with nitrate of silver, employment of mineral waters, &c., had failed.

THE LANCET.

LONDON: SATURDAY, JANUARY 3, 1874.

IN these early days of 1874 we have to wish our readers a Happy New Year. Some short-sighted people think the prosperity of the medical profession means the adversity of the public. This is really just the opposite of a correct notion. There is no calling with the success of which the welfare of the public is more bound up than with that of medicine. Our success consists in first preventing disease, and secondly, where this fails, in curing it. Our great endeavour and our great happiness, either in the therapeutic or the preventive branch of medicine, is the reduction of disease and suffering to a minimum. In developing and perfecting the hygienic department of medicine we are certainly "sore let and hindered," partly by the apathy of the public, but more by the self-conceit and domination of those departments of the Government which have been entrusted with the administration of Acts intended to promote the public health. A leading contemporary thinks so despondingly of the ignorance and apathy of the public in matters affecting public health as to suggest that, though half the existing disease is preventable, it must go unprevented for ten or twelve years more, till the public is educated by suffering to demand efficient legislation. We try to take a less gloomy view of the time that will be necessary to make the public demand legislation that shall secure to it fresh air, pure water, and unadulterated food. Meantime we must find our happiness in using such legislation as we have for preventing disease and its spread, and trying with all our might to heal disease when it does occur. A new year is a good time for men to take stock of their knowledge, and to ask themselves if they are doing all they can to keep open eyes for the admittance of new light, or whether they are not rather falling into ruts and routine methods of practice. A man should be a wiser and better practitioner every successive January, and the great proof of his wisdom should be a greater success in the treatment of disease, accompanied with a certain variation and enlargement in his methods and resources. The best practice, while consistent and more or less uniform, is not mechanical and unvarying. May we not suggest one other resolve suitable for the new year—viz., that we will have fewer quarrels and less discord in the profession; that we will think more of our neighbour's reputation and interest, and try to be more generous in the construction of his acts, and even in the judgment of his faults. We have enough to qualify the happiness of life in anxieties about our patients, without embittering life by quarrelling with our professional neighbours. With these reflections we wish our readers a happy new year; and we promise that no pains shall be spared on our part to make THE LANCET a medium for everything that will make medical practice smoother, higher, happier, and more efficient.

IN another column will be found a long letter from Professor HUMPHRY, of Cambridge, replying to our article of a fortnight back, and giving the reasons for his recent motion to reduce the qualification for the Fellowship of the College of Surgeons. We do not concur with our correspondent in his view of the "objects contemplated by the charter of the College in instituting the class of Fellows," for the appointment of 600 surgeons as Fellows could have had no effect in "promoting and encouraging the study and practice of the art and science of surgery," though it was extremely convenient thus to constitute the elective body necessary for the purposes of the charter. It must be remembered that the constituency at present includes upwards of 1300 Fellows, of whom some 450 are by examination; and that of this number not more than 350 ever exercise their elective functions on any one occasion. There need be no fear, therefore, of the constituency "dwindling to a very select circle," even if the additions are not more numerous than at present.

The Fellowship *by examination* was, doubtless, instituted as a distinction; but the elective right is merely an incidental privilege, as it is of a University degree which gives a vote in Convocation. The real object of the Fellowship by examination is best expressed in its author's—Sir B. BRODIE's—own words, which we quote from his autobiography.

"The object of this institution is to ensure the introduction into the profession of a certain number of young men who may be qualified to maintain its scientific character, and will be fully equal to its higher duties as hospital surgeons, teachers, and improvers of physiological, pathological, and surgical science afterwards. With this view, if they have not University degrees, they are required to undergo a preliminary examination in classics and mathematics; while, their professional education having been continued for a longer period of time, they are expected to show that they have a more perfect acquaintance with those sciences which are the foundation of medical and surgical knowledge than can be expected of the great majority of those who are candidates for practice. If this system be properly and honestly carried out, I apprehend that the result will be that the Fellowship of the College of Surgeons will be the most honourable distinction that is offered to the junior members of the medical profession."

The great object, then, of the charter, as interpreted by Sir B. BRODIE, was to induce some students who were content to forego for a time "the active, responsible, remunerative work of life," so feelingly described by Professor HUMPHRY, to qualify themselves by extra studies and additional hospital attendance for the higher posts in the profession. It is from men of this class that we get our registrars, curators of museums, and demonstrators of anatomy; and does Dr. HUMPHRY suppose that none of these gentlemen sometimes cast a longing eye upon the comparatively easy path by which their fellow-students who, being less ambitious have settled down at once into general practice in the country, have perhaps already become surgeons to large provincial hospitals? Are these happy country practitioners, who are debarred from no class of lucrative practice, to have every privilege of professional position accorded them without any sacrifice on their part?

Dr. HUMPHRY's proposition, as explained by himself, is

not to lighten the labours of the student who is willing to devote himself to scientific studies and to labour with the object of making himself worthier of the honour the College can confer upon him, but simply to ease matters for the young surgeon who, having by good luck dropped into a good practice and country hospital appointment early in life, is anxious to go up for his Fellowship before the slight remnant of the scientific training of his student days has escaped, which he feels morally certain it will do before the eight years now required of those who merely completed the Membership curriculum have expired. Far be it from us to decry the practical and scientific acquirements of provincial surgeons; and if Professor HUMPHRY would move to make the test applied at the end of eight years' Membership different in character, though not in degree, from that proposed for six-year students of twenty-five, we would give him our heartiest support. It has always been a regret to us that the College of Surgeons should have abandoned the practice of setting two papers for the Fellowship, for seniors and juniors respectively; and we believe it would be much more fair to demand a thorough knowledge of surgical anatomy and of practical surgery in all its branches of practitioners of eight years' standing, than to expect them to cram up all the minutiæ of modern physiology and pathology which may fairly enough be demanded of those whose studies have been continuous.

We believe that Professor HUMPHRY's good nature leads him to exaggerate the hardship which one or two provincial surgeons of eminence have complained of in having been debarred from the Fellowship; for it is, after all, only themselves and their want of early zeal that can be blamed. There are plenty of young provincial hospital surgeons who have of late years successfully passed the Fellowship examination; and the cases of their elders might be fairly enough met by the power which already exists, but which the Council has hitherto declined to exercise, of electing two Fellows annually from among Members of twenty years' standing. We regret that Dr. HUMPHRY should have taken umbrage at our casual reference to the fact that he ably represents the University of Cambridge, for such we take to be the fact as regards the General Medical Council, which was the body we had in our mind at the moment. We are quite ready to accept his assurance that his "zeal for his University had in this instance been subordinated to his zeal to promote what appears to him to be the true interests of the profession," though we do not agree with him as to the mode in which he proposes to further what we also have much at heart.

THE *Daily News* has admitted into its columns a letter, signed "Lex," on the salary of the Medical Officer of the Local Government Board, of a kind now happily rarely seen in a leading journal, and which, we take it, must have been printed by our contemporary inadvertently. This letter contains a deliberate attack upon Mr. JOHN SIMON; and its maliciousness is on a par with the actual or affected ignorance of the writer. The question first raised is that of the apparent inconsistency between Mr. SIMON's salary, as provided for by the Act of Parliament under which he holds office—namely, £1500,—and the salary he has now received for several years, £2000; and it is suggested that the provision of the Public Health Act, 1872, which empowers the Local Government Board to pay its Medical Officer such salary as the Treasury may from time to time determine, was in the nature of a Bill of Indemnity for the breach, in Mr. SIMON's favour, of the Act by which he was appointed. The writer admits that the plea for the augmentation of Mr. SIMON's salary was "the familiar one of increased work," but he has not taken the trouble to ascertain in what that increased work consists, although it might have been supposed to be now familiar to all who have the slightest knowledge of the discussions on this subject at the time of the Public Health Act, 1872. It was then made known that the increase of salary had been given by the Treasury because Mr. SIMON had been called upon by the Privy Council to do *other* work in addition to that he was required to do under the Act appointing him, and which work he continues to do. Indeed, Mr. SIMON now holds the double post of Medical Officer of the Privy Council and Medical Officer of the Local Government Board; and for the duties attached to the former he receives a yearly salary of £500, and for those of the latter £1500. These, we believe, are the broad facts of the case as to the salary, so far as Mr. SIMON is concerned. With the mode in which the provision for the augmented salary has been made we have no concern.

If "Lex" had limited himself to seeking an explanation of Mr. SIMON's salary, no exception could have been taken to his letter; but he makes the question of the salary simply a stalking-horse for an attack upon Mr. SIMON and his department, which, if it had not been malevolent, would have been most amusing. He describes Mr. SIMON's labours before becoming attached to the Local Government Board as "never onerous"; and holds that a salary of £1500 would have sufficiently remunerated him for them and for the loss of "a small private practice." He avers that, notwithstanding this assumed loss, Mr. SIMON carries on private practice as before in the capacity of surgeon to St. Thomas's Hospital and referee to the Crown Life Office, and "is in receipt of a handsome salary from both sources." He asks "to whom does this very fortunate officer owe these remarkable privileges"? And what follows we give as written:—

"The Estimates show that he now receives as large a salary as the President of the Local Government Board, but with responsibilities and duties how infinitely inferior. Now, he is the adviser of the Board, but the medical journals recently affirmed that in all the sanitary schemes of the last two years his opinion has not been solicited; that, in fact, he is the adviser who does not advise. He is not an executive official; and if he do not discharge this one function, what return does the country obtain for its £2000 a year? Is this office reserved as a reward for distinguished services to the State, or is it really a sinecure? If the former, where is the distinguished service? The Medical Directory fails to indicate any valuable discoveries or remarkable writings by this officer; and the report of the Medical Officer of the Privy Council, on which his repute as a sanitary official rests, was made by men of a certain distinction, at a great cost to the State, and not by himself. The share which he has had in them is only an analysis of the reports. Surely never was there so small a basis for so magnificent a reward! If, as seems probable, the office be practically a sinecure, is it not possible to abolish it, or to have its modest duties re-

munerated by a less immoderate salary? Perhaps this is the end to which legislation is tending; for as the officer, and not the office, was transferred to the Local Government Board, that department at least seems to have no power to appoint a successor.

"It may also be desirable for members of Parliament to look into the total cost of the Medical Department. Within ten or twelve years this has increased from the salaries of the Medical Officer and his clerk to a total of about £27,000 a year, and a huge staff of inspectors, with salaries of £1100, £1000, £800, £600, and £500 a year, besides allowances."

Is this ignorance of Mr. SIMON and his duties real or assumed? If real, it would be difficult to parallel the wanton maliciousness of a writer who thus attempts to besmirch the name of a man who as a pathologist has done work which makes his name known wherever medical science is known, and will give it a permanent place in the history of science, and as a hygienist has not only done perhaps more than any other man living to place public hygiene on a scientific basis, but has also contributed more than any other individual in giving to English hygiene the unrivaled reputation it possesses. The sanitary reports which "Lex" describes as "only an analysis" are the reports which have long formed, and must long form, the solid scientific basis of legislative and municipal sanitary work in this country! If the ignorance of "Lex" be assumed, it is not necessary that we should characterise it.

The position taken by "Lex," that because Mr. STANSFELD has not thought fit to avail himself of Mr. SIMON'S advice, therefore his office is a sinecure, not improbably indicates the kind of "policy" which is being carried out in respect of that office, and its possible extinction at Gwydyr House, and we commend it to the thoughtful attention of our readers.

But it is not only for the personal attack on Mr. SIMON that this letter deserves notice, and against which it is almost superfluous to make a defence, but also for the tone as regards the medical profession which pervades it, and the statements as to the future of Mr. SIMON'S office. The argument of the letter amounts to this, that there never has been a justification for Mr. SIMON'S office, and now since the establishment of the Local Government Board this office has been a mere sinecure; therefore either the salary should be reduced or the office abolished. If the expenditure of the Medical Department were looked into, probably the same state of things would be found. Mr. SIMON and his colleagues, in short, have in some undetermined way continued injuriously to fix themselves upon the nation in very comfortable positions; but if the chief is not needed, it can hardly be maintained that his colleagues are needed. Mr. STANSFELD has contrived hitherto to do without Mr. SIMON'S advice, and sanitary administration goes on, it would seem (no matter after what fashion, but it does go on), and what more is wanted? Medicine in the public civil service is, if not a misappropriation, at least a misapplication of funds. There are lots of promising young men at the bar and elsewhere who are quite prepared to do the work done by the doctors, at a less cost, and quite to their own satisfaction and to the satisfaction of a certain amount of political patronage.

In brief, the letter attempts to cover Mr. STANSFELD'S "policy" as to the Medical Department by depreciating the reputation and services of its chief, and through him the members of his staff. It further seeks ingeniously to put the question of reducing or doing away with the Medical Department of the Local Government Board as one of an economical character. May it not be an indication as to what the profession must look for from Gwydyr House? Mr. SIMON and his staff represent the principle that medicine should have the fullest recognition in the Central arrangements for the public health administration of the kingdom, not only because they affect large numbers of medical men, but because in their essence they relate to the prevention of disease. We fear that Mr. STANSFELD is determined that medicine shall no longer be represented in the civil State, as it has hitherto been represented by Mr. SIMON and his staff; and that it shall be degraded to a secondary position, in which its capacities for the public good must necessarily be largely wasted. Mr. STANSFELD for the moment is all-powerful; but it will be for the medical profession to say to what extent they will submit to a "policy" which dishonours medicine, which is injurious to the public weal, and which it is difficult to believe has any other object than the aggrandisement of one department of the public service at the expense of another department.

THE *quæstio vexata* of vivisection is again before the public, and we hope the discussion will not close until a solution be arrived at in accordance with the dictates of humanity and the interests of science. Curiously enough, the resuscitation of the controversy comes from Italy, where cruelty to horses is so notorious that one hardly looked for so much sympathy for the occasional sufferings of dogs. Professor MORITZ SCHIFF, who holds the Chair of Physiology in the Royal Superior Institute of Florence, in the course of a series of researches, has, it seems, operated on a number of living dogs, whose cries were such as to annoy the inhabitants of the neighbourhood. The Syndic, Signor PERUZZI, and Professor SCHIFF, have accordingly been indicted by these good people for nuisance; but before the trial came on the question at issue was settled out of court, the defendants, it is stated, having pledged their word that the offence shall not be repeated.

For aught that we can learn Professor SCHIFF continues his vivisections as before, but with the difference that he anæsthetises his victims and prevents their cries. Now, no one, however attached he may be to the lower animals, can reasonably complain of the practice of vivisection when performed sparingly, and with due precaution that the subject shall feel no pain. But for experiments of the kind Professor SCHIFF is performing, physiology would be much less accurately understood than it is now; errors the most mischievous would still prevail; and the cognate science of pathology would still have its frontiers to rectify. Compare our knowledge of the function of digestion now with what was known of the same function fifty years ago, and then say to what do we owe our immense advantages in distinctness and trustworthiness of information? Simply to vivisection, which, in the hands of BIDDER and SCHMIDT, CLAUDE BERNARD, and others, exposed to view certain processes, mechanical and chemical, which were previously

veiled in mystery. The experiments conducted by HUGHES BENNETT and his disciples some years ago on the liver and its functions, physiological and pathological, were also pregnant with new data in correction of universally received doctrine; while the investigations of FERRIER and others on the localisation of function in the cerebrum—so full of promise for the treatment of the insane—constitute other cases in point where science would have been reduced to a standstill but for the crucial test of vivisection.

Yes; the far more enlightened and essentially humane treatment of disease which distinguishes the present from the past generation, springs, as every practitioner knows, from the more penetrating insight we have obtained into the vital processes—insight which would have been for ever withheld but for the ocular demonstration of these processes afforded by vivisection. The practice has more than justified itself already; and, judiciously and humanely performed, will continue to justify itself. But having said thus much, we are very far from vindicating the indiscriminate, not to say wanton, indulgence in this last resort of the thoroughly trained physiologist by mere novices or *dilettanti* in the science. We have no reprobation strong enough for the practice, far less common now than when MAJENDIE came amongst us, of impaling butterflies and cockchafers, dissecting frogs, and torturing cats, as pursued by medical students in their raw enthusiasm. We cannot sufficiently condemn the dulness of soul which, under the pretence of cultivating "science," can subject even the humblest of the lower organisms to the torture of the scalpel and the induction coil. Vivisection is warrantable only when the thoroughly trained physiologist has exhausted every other means of arriving at the truth and failed; and even then it should be resorted to only under conditions which reduce the victim's sufferings to a minimum, if not to *nil*. Practised rudely and wantonly vivisection is not more hurtful to the wretched subject than to the moral nature of its practitioner, and it is precisely among the less masculine, and therefore crueller races—the Latin rather than the Teutonic—that inhumanity to the brute creation, even without the scientific plea of vivisection, goes hand in hand with a lower morality, whether public or domestic, and a less genial regard to the feelings and interests of one's fellow-man. We have too much faith in the English head and heart to be at all disturbed by the fear that the practices of the French and Italian veterinary schools and physiological laboratories will ever be acclimatised among us.

Science, *per se*, is never cruel; and her latest teaching, whether rationally founded or not, that the lower are linked to the higher organisms in an indissoluble chain of evolution, will, if practically observed, rather strengthen than relax our sympathies for the brute creation. The nature-worshipper can be unkind to none of nature's creatures, and the old adage, "*Homo sum*," reaches further than its Roman author could have conceived. But even in the halls of science "offences will come," and such as have been lately disclosed in foreign schools should be promptly protested against and put down. Here, and we would fain hope elsewhere, the conditions under which vivisection should be practised ought never to be other than these: that none but accredited teachers should be allowed to perform the operation, and that even then the number of animals allowed to each school for the purpose should be restricted by law, while anæsthesia should invariably have been induced before the experimenter begins.

The Times has broken a long silence on the question of sanitary legislation, and for the first time, if we mistake not, has touched upon the general policy adopted by the Local Government Board in the initiation of the Public Health Act of 1872. The occasion of this utterance was a letter addressed to that journal by Mr. POWELL, M.P., requesting renewed attention to the more important features of the Public Health Bill introduced into the House of Commons by Sir CHAS. ADDERLEY, Mr. WHITBREAD, himself, and others during last session, and which is again to be introduced—"in substance at least, for the most part in letter"—early in the session of 1874. We have already expressed our hearty approval of the principal provisions of this Bill (THE LANCET, April 19th, 1873), and we shall not revert to them here, except to notice an objection to one of them taken by *The Times*. This journal directs attention to the provision of the Bill (18) which would give rural sanitary authorities power to make building bye-laws, and would enlarge the scope of these bye-laws, but debars these authorities, except empowered under the 33rd section of the Public Health Act of 1872, from requiring notices to be given of plans and sections by persons intending to lay out streets or to construct buildings, or from removing, altering, or pulling down any work begun or done in contravention of such bye-laws. Upon this *The Times* observes that "it was to be optional whether to obey them, and no power of enforcement would exist." A member of the late Royal Sanitary Commission, in a letter upon this objection, has, however, pointed out that the sanitary authority would have the power under Section 115 of the Public Health Act of 1848 of imposing penalties, not exceeding five pounds for each offence, for breach of the bye-laws; and he states that it was thought to be expedient by the framers of the Bill to rest content with this provision for securing obedience in rural districts to the bye-laws. How far this opinion may be justified it would be impossible rightly so say until the form of bye-laws proposed to be adopted in rural districts is agreed upon; but it is obvious that the reservations of the Bill take away the two chief securities for obedience to the bye-laws.

This, however, by the way. The importance of the article of *The Times* rests with the expression of opinion upon the advisability of urging this Bill forwards, and the reasons expressed for hesitation in so doing. Reviewing briefly the action of the Local Government Board in initiating the Public Health Act, 1872, the avowed experimental nature of the measures adopted, and the unfortunate nature of the results to the present time, "the advice given in different places having not only been different, but contradictory, and the mind of Parliament interpreted in many and various ways"; remarking also on the newness of the several authorities to their work, and their inexperience in that work, *The Times* thinks that,

notwithstanding the good results which might follow from the passing of Mr. POWELL'S Bill,—

"It may be fairly urged that further legislation should not be hurried, and that it might even await the result of due inquiry, by a Select Committee or a Royal Commission, into the working of the Act of 1872 as a whole, and into the comparative results of the various systems of administration by which the Local Government Board has sought to carry that Act into effect. It would also be interesting to know how far the new duties imposed upon boards of guardians have served to modify, in the manner anticipated by the Royal Sanitary Commission, the composition and character of those bodies, and whether they should now be regarded as willing or as reluctant administrators. The delay might leave injurious conditions unremedied, but it would also educate the community to desire and to assist in their removal. Looking forward for ten or a dozen years, it may well be surmised that great haste might not at present lead to real progress."

Of the wisdom of the suggestion here thrown out there can hardly be a question with those who have followed closely the sanitary work of the Local Government Board. The injury arising from leaving unremedied a short while longer the conditions which it is the object of Mr. POWELL'S Bill to provide against would be slight compared with that which is being perpetrated by the mistaken mode in which the Public Health Act of 1872 has been initiated. The injurious conditions which the Bill seeks to relieve can at any time be dealt with when the Legislature is so disposed; but the injurious conditions which are arising from the erroneous initiation of the Public Health Act, 1872, touch matters of sanitary principles and practice which lie at the root of all sanitary work, and which, if not rightfully conceived and carried out by the new sanitary authorities from the first, will work untold mischief. Hence the necessity for an early inquiry into the results of Mr. STANSFELD'S policy in the initiation of the Public Health Act, 1872; and the advisability, as *The Times* rightly suggests, of postponing further sanitary legislation until such inquiry has been made.

THE *Saturday Review* has lately launched out against "experts," *apropos* of a recent dramatic trial in which professional evidence was produced to show that there was nothing, in the opinion of veteran actors, indecent in the play in question. We quite agree with our contemporary that, with the play read out as it was in open court, the jury were the best judges of the question, and that possibly the sense of propriety might become somewhat dulled in a veteran actor or playwright accustomed, in his younger days at least, to see and hear some very odd things on the stage. We cannot agree, however, with the onslaught made upon "experts in the form of mad doctors, chemical analysts," and professional men generally, for the ground on which they stand is very different, as we shall proceed to show.

If a jury of non-scientific men were able to form a correct, or in fact any, judgment as to the sanity or otherwise of a prisoner placed at the bar, or were able to form any guess as to the real chances of recovery of a plaintiff in an action for damages sustained on a railway, there would be no need for scientific evidence or opinion at all—the facts would speak for themselves. But, unfortunately, the experience of every asylum shows that the maddest patients are often the most crafty in concealing temporarily their hallucinations, and that insanity may be lurking beneath the apparently most sedate and sensible demeanour. So also in railway or other trials for injury, if the injury were, as sometimes happens, simply the loss of a limb, a jury could assess the damage sustained pretty readily without scientific help. But the case is very different when the injuries are, as so frequently happens, to the nervous system, giving rise perhaps to partial paralysis of motion or sensation, and the train of symptoms commonly comprehended nowadays under the head of "nervous shock." If juries were to be guided in such cases only by their own senses, a still greater premium would be offered than at present to the melodramatic talents of the plaintiff's attorney, who knows perfectly well already that if his client can be induced to burst into tears or faint, or, still better, if he or she can be brought into Court upon a couch, with all its interesting surroundings, the tender hearts of a British jury are sure to be influenced, and the verdict swelled by some hundreds of pounds.

It is to be regretted, no doubt, that certain medical men should have gained a reputation as "good witnesses"—i. e., if it is thereby understood that they are ready to "swear up to" anything they may be asked on behalf of their client for the time being, whether plaintiff or defendant. Still the necessity exists for the evidence of those who have seen a large number of similar cases; for without such experience it is impossible to have any useful opinion as to the progress of the case. And this is where harm is occasionally done to the whole profession by the confident opinion given by young or inexperienced medical men as to the nature of the injuries received, and the probable future of their client. We quite agree with the *Saturday Review* that "a good deal might be said in favour of employing experts as jurymen or assessors"; and it is in the latter position that we should prefer to see eminent medical men with special experience bearing upon the matter in hand, be it medical, surgical, or obstetrical; but until the practice of law-courts is altered, so as to admit of this innovation, we cannot wish to see experts altogether excluded from the witness-box, though we are quite willing that they "should be watched with the greatest jealousy."

Medical Annotations.

"Ne quid nimis."

EFFECTS OF CHEMICAL MANUFACTURES ON HEALTH.

OUR attention has recently been drawn to the high death-rate which prevails in the town of Newcastle-on-Tyne. Our correspondent in the town alluded to it in a recent letter, and to the action which the Northumberland and Durham Medical Society has taken in regard to it. In the Returns of the Registrar-General, Newcastle has lately shown, on more than one occasion, a higher death-rate than any other of the large towns of England. On examining the tables supplied to us by Mr. H. E. Armstrong, the medical officer of health, we find that in the thirty-two weeks ending Nov. 29th the average death-rate was over 30 per 1000 per annum, the highest in one week being 40 and the lowest

22 per 1000. Of the total deaths in the above period, almost exactly 25 per cent. were from zymotic diseases, the highest proportion being 40 and the lowest 10 per cent. Scarlatina caused 10 per cent. of the total deaths, and in November the percentage of deaths from this disease rose to 22.

An inquiry into the causes of this unusual death-rate involves the study of several complex elements. It is necessary to consider the influence not only of the conditions common to all large towns, such as water-supply, drainage arrangements, house accommodation, and the like,—but also of those which depend on the fact that Newcastle is one of our greatest manufacturing centres. Vast chemical and metal factories lie on the outskirts of the town, and equally vast collieries surround it. These works, essential to our prosperity as a nation, can yet hardly fail, however well managed, to inflict some injury upon human health and life. That they poison the air and pollute the river is manifest; and it is but too probable that, in some cases at any rate, they affect in an even more direct manner the health of the workmen employed upon them. From time to time, as they have increased in magnitude, the arm of the law has been brought to bear on these gigantic undertakings, and measures have been passed intended to reduce their evil effects without crippling their prosperity. Some success has undoubtedly crowned these efforts, but the feeling appears to be gaining ground that the time has come for further efforts, and it is probable that at any rate one great experiment will be attempted in the course of the approaching session of Parliament, in the shape of the long-talked-of Rivers Pollution Bill.

These considerations have induced us to send special commissioners to Newcastle and some of the other manufacturing centres for the purpose of collecting information in regard to the great sanitary questions now pending. In view of the magnitude of these questions, we cannot hope that their investigations will be exhaustive; but their reports will at any rate be unbiased, and can hardly fail to assist our readers in forming a sound and practical opinion upon the nature of the evils to be dealt with.

The inquiry commenced, as was natural, at Newcastle. Our recent experience in regard to Wolverhampton raised some doubts as to the reception that our representatives would receive from the town authorities. But all such doubts were speedily dissipated; and we are glad to be able to express to those gentlemen, as well as to the medical men and many of the large manufacturers of the neighbourhood, our warm thanks for the courteous and cordial assistance which they afforded to our representatives. In no single case has information been denied to us; and it has been rendered abundantly evident that the town authorities and manufacturers are alike anxious to do all that lies in their power to improve the sanitary condition of the town and neighbourhood, and are prepared to make any reasonable sacrifice in order to attain this end. One of our representatives was favoured by an introduction to a meeting of the Town Improvements Committee, who had assembled in order to consider the abnormal death-rate. Every fact that had been collected was freely laid before him; and he can testify to the great zeal and intelligence which the members of the Committee brought to bear upon the question. If the death-rate is not speedily reduced it will be from no want of energy in the Executive Committee.

INCREMATION.

WE have on several occasions brought the subject of cremation before our readers, and have very recently given a full account of the mode in which the process might be carried out, as suggested by Professor Brunetti. The subject has been discussed by Sir Henry Thompson in the pages of the *Contemporary Review*, and there can be no doubt that various arguments may be advanced in its favour, whilst comparatively few can be adduced against it.

In the first place, as Sir Henry argues, incremation only effects rapidly what inhumation accomplishes slowly, clumsily, and wastefully. The death and decomposition of the animal is the very means of life, nutrition, and development of the vegetable kingdom. Carbonic acid, ammonia, and salts are the products of the disintegration of the animal body, whether rapidly or slowly completed. But in burial in the earth months or years may elapse before these changes have reached their limit, whilst in cremation the whole cycle is finished in a few hours. In a sanitary point of view no question can be entertained on which side the advantage lies. In cremation the ultimate chemical compounds are formed at once without prejudice to the living, whilst in burial the intermediate products are extremely harmful, and, to say the least, are capable of inducing disease and death in the living. Even in cheapness the advantage is altogether on the side of cremation, for a body may be burnt at a cost little exceeding half-a-crown in fuel.

We think Sir Henry Thompson somewhat weakens his argument by dwelling on the value of the ashes. It is not likely that they would ever be used for economical purposes. The affection of friends and the introduction of funeral urns, which would certainly soon become general, would prevent all but a very small proportion of the capital at present spent in the importation of foreign bones for manure being supplied by human ashes, even supposing cremation to be universal.

The main objections to cremation rest on sentiment and custom. A custom of many thousand years' duration—for the practice at least ascends to the time of Abraham—is not easily broken through; whilst the sentiment so impressively expressed in our burial service that these our bodies shall rise again in an incorruptible state must not be lightly disregarded. Sir Thos. Browne, however, cites various authorities in his "Hydrotaphia" to show that cremation was common amongst the old German nations, and was practised by the Druids. It would, therefore, only be a return in our case to ancient usage. It is certain that any change from established usage in the mode of disposing of the dead could only be slowly introduced; but the vulgar mind might be gradually familiarised with it by the erection of an incremation furnace, and the performance of the rite, with due solemnity, and under the supervision of properly-appointed officers in cases of unclaimed poor, whilst the arguments for its adoption by the better classes must be those which Sir Henry Thompson has well expressed in the paper above referred to—economy, cleanliness, and wholesomeness.

THE MEDICAL STAFF ON THE GOLD COAST.

IT is unfortunate in some respects that the recent unforeseen military operations on the Gold Coast have entailed so much work on the small body of medical officers stationed there. The medical establishment of that station, according to the Army List, numbers eight medical officers. Owing to the requirements of numerous small detachments drawing off so many officers, the strength of this establishment soon became dissipated, and some of the medical men at Cape Coast Castle, to which the sick and wounded naturally gravitated as the base of operations, have been terribly overworked, and compelled to discharge all kinds of duties over and above those of a strictly professional character. It has excited much surprise that the number of the medical staff and subordinate hospital corps service should hitherto have been so small and inadequate. We

think, however, that the fact may be readily accounted for on the assumption that the home authorities did not feel justified in sending out a large number in advance of the European force, especially while it was still uncertain whether an expedition on the present scale would be undertaken at all. However, the supply of doctors is abundant enough now. From the Army List and other sources of information we gather that upwards of seventy medical officers have been despatched to the Gold Coast in connexion with this expedition. Of this number fourteen went in advance of the European troops, and the remainder either accompanied them or are already on their way to the Coast. This number is, of course, exclusive of the medical officers attached to the West India regiments and the naval surgeons available on shipboard or accompanying the parties of sailors and marines on shore. In addition to this force of doctors, we understand that the aggregate number of officers, non-commissioned officers, and privates of the Army Hospital Corps represents a force of some 130 men.

INFANT MORTALITY.

Apropos of some recent observations of ours upon the subject of infant mortality, we are indebted to Mr. George Rendle, M.R.C.S., for a diagram exhibiting the whole of the 622 registration districts of England and Wales, arranged according to their scale of infantile death-rate during the ten years 1861–70. Mr. Rendle has found the materials for his work in a Parliamentary paper of last session, and the results which he has brought to light are extremely interesting. Over all England and Wales the average annual deaths from all causes of children under one year of age were during the ten years in the proportion of 18·0 to every 100 children living of the same age; the extreme range in the local rates was from 7·9 in the Billesdon district (Leicestershire), to 30·5 in the Liverpool district. Next to Liverpool in the order of greatest infantile mortality stands Leicester, with a ratio of 26·7 per cent.; then follow Preston (26·1), Leeds (25·6), Manchester (25·1), Yarmouth (24·9), St. Giles, Bloomsbury (24·8), Blackburn (23·6), Bradford (23·7), Sheffield (23·7), and Luton (23·4). Altogether there are 155 districts in which the rates are in excess of the average, and these districts are for the most part urban, with dense populations. Why, however, such districts as Hoo, Canterbury, Docking, Freebridge Lynn, and a few others should be found in this group, is by no means obvious. In 86 districts, mostly but not exclusively agricultural, the rates did not exceed 12 per cent. That the causes which lie at the root of the remarkable differences in the infantile death-rates of districts possessing the same characteristic features are well worth investigation is demonstrated in Mr. Rendle's diagram, where many cases appear which do not square with views commonly entertained as to the conditions most fatal to infant life. The two cathedral cities of Canterbury and Chichester, for example, are nearly at the two extremes of highest and lowest mortality in the diagram.

We have another illustration of this disparity in a report lately made to the Macclesfield local board by Dr. Bland, the medical officer of health, who draws attention to the fact that in the eight sub-districts constituting the union of Macclesfield, the proportion of children dying before the vaccination period ranged in the first six months of 1873 from 37 to 162 per 1000 of the births registered. Dr. Bland notes, with reference to the relation assumed to exist between the employment of married women in factories and a high death-rate amongst their children, that in the Alderley sub-district, where the ratio of deaths was highest, "it is exceptional for women to be employed in factories." In the part of the union which is within the borough of Macclesfield, the ratio was 124 per 1000, as compared with 91 in the union extra-municipal, and as between an urban and a rural locality this difference is not remarkable; but ratios of 84 and 169 per 1000 in two parts of the same town cannot but suggest inquiry.

Regarding the general question of infantile mortality, there are two standards that may be used for all practical purposes—the one is the English Life Table, which is based on such an extended series of observations as to render it a safe measure of the chances of life among the entire English population; the other is the Healthy District Life Table, which, according to Dr. Farr, "has been found by experience to express very accurately the actual duration of life among the clergy and other classes of the community living under favourable circumstances." By the English Life Table the mortality in the first year of life is found to be 16·6 per cent.; from two to five years of age the rate is 2·6, from five to ten years it is 1·0, and from ten to fifteen years 0·5 per cent. The corresponding healthy district rates are as follow:—In the first year of age 10·9, from two to five years 1·7, from five to ten years 0·7, and from ten to fifteen years 0·4 per cent. Of course it will be at once seen that the striking disparity between the rates at ages under and over the fifth year makes it of the first importance that in any comparison of juvenile mortality the element of age should be carefully considered.

"DRUNK OR DYING?"

EVERY week furnishes additional proof of the importance of the police calling in medical aid to all cases of severe intoxication, and even to mild ones when the prisoner specially requests it. Quite recently two instances have occurred in which death has seized the persons under the charge of the police for drunkenness. The first was at Manchester, where a man was taken into custody at half-past ten at night in an insensible condition from intoxication. The inspector at the station made many ineffectual attempts to rouse the man, but did not deem it necessary to remove him to the infirmary till three hours and a half had elapsed. The unfortunate man never recovered consciousness, and died six hours after admission. At the coroner's inquest, the medical officer of the infirmary gave evidence that the deceased had died of coma induced by alcoholic poisoning. He further remarked that in his opinion such a person should be taken to the infirmary at once. The jury wisely supplemented their verdict, which was given in accordance with the medical evidence, by the recommendation, "That in any case of absolute insensibility arising from drink, and when the police cannot rouse the person, an immediate medical opinion be obtained." In the second case, which occurred at Stockton-on-Tees, a man was taken into custody for being drunk. It is stated that at the police-station the prisoner asked for the attendance of a medical man, but his request was unheeded. Next morning, on the way to the court, the poor man again requested medical aid, but as he did not actually state to the officer in charge that he was ill it was not thought necessary to go to the trouble or expense of calling in a medical man. Shortly after the case had been dismissed by the presiding magistrates, the man, who was evidently seriously ill, sat down on a seat outside the dock, "was taken in a fit," and died. At this juncture a messenger was of course at once despatched for a medical man, who could do no more than assure the magistrates that life was extinct. In this case also a coroner's inquest was held, but the evidence adduced was far from satisfactory. The police attempted to vindicate themselves by stating that nothing but kindness had been shown by them to their unfortunate prisoner. Nor was it ascertained of what the deceased had died, for, according to the local

papers, the surgeon who was called in by the police stated that he had examined the body *externally*, carefully, and did not see anything by which he could decide as to the cause of death. From the evidence he had heard he should say that the man had died of heart disease. On the remonstrance of one of the jurymen, that without a post-mortem examination it was impossible accurately to determine the cause of death, the coroner—who, by-the-by, was neither a medical man nor a lawyer—dispelled all doubt by a *petitio principii*, in remarking that if the jury "had no doubt that deceased met his death naturally, and that no one offered him injury, there was no necessity to put the county to the expense of a post-mortem examination." Thus the objection of the jury was overruled by the coroner, and a verdict was given of "Death from natural causes."

In another instance, tried before Mr. Knox, two men were charged with being drunk and disorderly. In this case, a medical man, who had examined the prisoners at their own request, stated that he had no doubt they were drunk. Mr. Knox approved of the conduct of the inspector in sending for the doctor, and expressed a hope that in future cases, if any doubt existed, this would always be done. By the advocacy of experienced magistrates, and by the warning afforded by such cases as we have just referred to, we may hope that eventually the police will see the wisdom, propriety, and humanity of ascertaining whether a prisoner be drunk, ill, or dying.

ARSENICAL PAPERS.

THE use of arsenic in wall-papers is still common, notwithstanding the fact that many cases of serious injury to health have been traced to this cause. The most dangerous papers are those covered with a thick, unvarnished, loosely-coherent layer of Scheele's green, and these papers are, strange to say, most frequently seen in our nurseries. Now children's beds are very often placed sideways against the wall, and, under these circumstances, the attrition of the bedclothes easily removes portions of the poisonous colouring matter. The fine cupro-arsenical dust which thus becomes diffused through the air occasionally produces in children symptoms resembling those of a violent catarrh, and we have seen a specimen of green paper which had been quite denuded of its colouring matter in those parts which had been exposed to the action of bedclothes. The paper in question originally contained nearly eighteen grains of arsenious acid in a square foot; and when it is remembered that a piece of this paper large enough to wrap up a pair of soles might cause the death of four persons, it becomes a question whether the sale and indiscriminate use of such an article should not be prohibited. In Prussia the use of arsenical pigments is interdicted unless the colouring matter is properly fixed or protected from accidental removal, and it appears desirable that some such regulation should come into force here.

Arsenic occurs not only in the bright-green papers, but also occasionally in the white or cream-coloured enamel papers so frequently used for drawing-rooms, and in drab papers tinted with native ochre. It has been found that very many samples of wall-paper contain a minute trace of arsenic, far too small to be injurious, and this probably arises from the imperfect cleaning of colour tanks which have been used for arsenical materials.

Arsenic is most conveniently detected in papers by the method of Reinsch, and as the minute traces just mentioned may be generally disregarded, the operation of testing becomes very simple. A strip of clean copper-foil $\frac{1}{16}$ in. wide, and $\frac{3}{4}$ in. long, is boiled in a test-tube with about one drachm of diluted hydrochloric acid, and if at the end of three minutes the copper retains its colour, the acid may be considered free from arsenic. About a square inch of the paper is now introduced, and the boiling is continued for about five minutes. If arsenic is present the copper loses its lustre, and becomes covered with a dark crust of arsenic; but the darkening of the metal must not be considered as a conclusive proof of the presence of arsenic, as papers frequently contain ultramarine, blue or green, and this, when treated with an acid, yields sulphuretted hydrogen, which, acting on the copper, produces a dark film of copper sulphide on its surface. After having been washed and dried with blotting-paper, the darkened slip of copper is heated to low redness in a narrow glass tube about three inches long. If the dark colour was produced by arsenic, a sublimate consisting of minute shining octahedrons will deposit itself in the cold part of the tube. A lens is often necessary to render the crystals visible.

ELECTRO-MOTOR PHENOMENA IN THE COATS OF THE AORTA POST MORTEM.

AT the Islington Medical Society, a few nights ago, Dr. C. Meymott Tidy mentioned briefly the result of some experiments on the electric condition of the coats of the aorta post mortem, which may prove to be important from a medico-legal, as they certainly are interesting from a physiological, point of view. The chief points of Dr. Tidy's statement were:—

1st. That the aorta cut up into pieces about the size of a shilling, and arranged so that the outside coat of one piece was in contact with the inside coat of the next, produced a distinct galvanic current, perfectly apparent when the two ends were connected with a delicate galvanometer.

2nd. That ordinarily this action does not last longer than three hours and a half to four hours after death, the period being tolerably constant in all animals.

3rd. That in some diseases the period was less than this, as in phthisis and wasting diseases generally, and in typhoid fever.

4th. That in animals poisoned with aconite, the period during which the galvanic action lasted was considerably longer than usual, and sometimes even double the time.

If these observations should be confirmed by further experiments, they may prove of some value in determining the length of time which has elapsed since death. Dr. Tidy means to develop his experiments before formally detailing them to the profession and stating his opinion of the significance of the curious phenomena which he has observed. Meantime, he has kindly permitted us to indicate the general nature of the results he has obtained.

THE FOG IN LONDON.

LONDON has known denser fogs than that which visited it during the Cattle Show week, but we do not call to mind any which lasted so long. From Monday until Friday the atmosphere in town was simply abominable, so laden was it with smoke and dirt. The wonder is that it did not prove far more destructive to life than it seems to have done. Fogs are common enough in other parts of the country, but a real "London particular" bears no sort of resemblance to an ordinary country fog. The enormous metropolitan area of 118 square miles when a fog settles down upon it, just "stews in its own gravy," if we may apply a Bismarkian form of expression, to convey an idea of the manner in which we are then made to consume our own smoke. From the chimneys of half a million houses products are discharged which, instead of being dispersed by air currents, are driven down again into the streets and houses, where they find out all the weak points of our respiratory organs and send to a premature grave those who have not strength to bear

up against the abnormal pressure. In estimating the effects of such a visitation we must bear in mind not only the absolute loss of life, but what is of even more importance—namely, the amount of sickness, to result in future mortality, of which it is the cause. A registration of disease would give some clue to this latter element, but this we have not, and speculation upon the point is useless. The Registrar-General's weekly returns show that whereas the death-rate in London for the week ending December 6th was 23 per 1000, in the following week, when the fog was prevailing, the rate rose to 27, and in the week afterwards the full effect of the fog is shown by the remarkable death-rate of 38 per 1000. The deaths returned from phthisis and diseases of the respiratory organs in the same weeks were 520, 764, 1112. It is, moreover, worthy of note that though the fog was coincident with a very low temperature, the cold of itself would not account for the increased mortality, for in the large provincial towns, where the weather was equally cold, but was unaccompanied by fog, the increase in the mortality was slight compared with that which occurred in London. The mean of the deaths registered in London in the two weeks ending December 20th showed an increase of 41 per cent. upon the number returned in the first week of the month; the corresponding increase in the seventeen other large English towns was only 8 per cent.

SICKNESS IN FRIENDLY SOCIETIES.

THE annual report of the Registrar of Friendly Societies in England ought to be one of the most valuable of our yearly blue-books, yet we never come across it without feeling that the Registrar is prodigal of information of a sort which is about as readable as an auctioneer's catalogue, but provokingly chary of communicating what we most want to know. In his last report he speaks of having in 1872 issued forms to 21,819 societies for the annual return required by 18 and 19 Vic., c. 63, and of having received the required information from 12,267 of such societies. Now these returns show the amount of sickness and mortality experienced by each society during the year, and considering that (as far at least as we can make out) about one in every twelve of the population of England and Wales is a member of a Friendly Society, it is clear that such a collection of data must be of great interest and value. Mr. Stephenson, however, contents himself with merely giving the particulars of sickness and mortality for three counties, and in his summary table for England and Wales those particulars do not appear. His statistics are defective in just those very points as to which they ought to be most complete.

The three specimen counties may or may not be fairly representative of the whole country, but this is what they show in respect of sickness and mortality among the members of the societies making returns. In Cheshire 133 societies comprised 13,793 members in 1872; the deaths in the year amounted to 195; there was an average of nine days' sickness to each member, and the sickness of each sick member had an average duration of forty-five days. In Cornwall 5848 members of 51 societies lost 74 by death, each member had on an average nine days' sickness, and the duration of the sickness averaged forty-two days. In Bedfordshire there were 46 deaths among 4049 members of 53 societies, the average sick-time per member was nine days, and the average duration of sickness thirty-four days. The local friendly societies in the three counties exhibit a larger proportion of sickness than the Odd Fellows, Foresters, and other affiliated orders, and there must be reasons for this, but the Registrar "cannot say" what these may be. He cannot tell us to what extent it is the result of the "greater average age of the members," or of "more effective supervision over claims for sick pay," or of "wiser limiting provisions in the rules relating to the time during which a member shall be entitled to sick allowance," in the one class of societies as compared with the rest. Yet it seems to us that this is precisely what we ought to be able to learn from his report.

THE ARRANGEMENTS FOR INVALIDING FROM THE GOLD COAST.

THE action taken by the Portuguese Government in declaring the West Coast of Africa infected will of course subject vessels from that coast to quarantine, and the result will be that Madeira will certainly not be available as a sanatorium for our sick and wounded soldiers, and it is possible that some difficulty may hereafter arise as regards Gibraltar also. However improbable it may appear to us to suppose that yellow fever might be introduced at that station by vessels leaving Cape Coast with invalids suffering from ordinary and non-specific fevers and arriving with a clean bill of health, foreign Governments may choose to think differently, and we may be sure that every respect will be paid to their regulations. It becomes, therefore, a serious question whether the advent of yellow fever to the southward of Cape Coast is likely to upset the invaliding arrangements altogether. We have every reason to believe, however, that the authorities are quite prepared to meet a contingency of this kind by transferring all the invalids to this country, if necessary. It may be well to add that up to the present time we have positive assurances that no cases of yellow fever have made their appearance at Cape Coast Castle. The worst forms of fever that have hitherto occurred there have been of the bilious-remittent type, endemic to that station, and these have shown no tendency to spread. At the instigation of the army doctors, Sir Garnet Wolseley got an ordinance passed, and quarantine is imposed on all vessels arriving at Cape Coast from suspected ports. Should it happen that yellow fever appeared in the fleet or on shore, the doctors are sure to spare no effort to avert its spread; and if it came to the worst, and yellow fever even became epidemic, the ships that took the force there could bring it away again. But we do not apprehend anything of the kind, and the probabilities of such an occurrence are diminishing. Let the troops advance beyond the maritime district immediately on arriving, and let them leave the place altogether before the wet season commences, and we hope and believe that fears about yellow fever may be dismissed.

LEAMINGTON.

ENGLAND is far richer in health-resorts than is generally known. Some of them maintain unequal battle against foreign competitors, others have lapsed into comparative neglect. Amongst these Leamington—at one time the "Bethesda of the Midlands"—only needs rehabilitation to recover her pristine prestige. The virtues of her waters, rich in sulphates and muriates of soda and lime, seem to have gained in efficacy by the interval of respite allowed them, the latest analyses showing the residual salts from a gallon of water to be 1320 grains, an increase of 360 grains per gallon; so that the waters are about one-fourth stronger than they were two hundred years ago. With the decease of Jephson, to whose skill and personal popularity Leamington owed much of her reputation, invalids and health-hunters resorted to other and less beneficial spas; but "the whirligig of Time brings in his revenges"; a reaction in favour of Leamington has set in, and the inhabitants will have but themselves to blame if they do not deflect the stream of visitors from other water-courses into their own. Let but the native and artificial advantages of the

town—its pure air, its many facilities for out-door exercise, such as fishing, shooting, and, above all, hunting, and its central position—be adequately reinforced by improved public buildings and private accommodation, by a winter garden and a suitable assortment of sanatoria in connexion with the pump-room and the baths, and there is no reason why Leamington should not be one of the most favoured health-resorts in the kingdom. "Woody Warwickshire" owes it to herself and her noble traditions, historical, æsthetic, and literary, to heighten the attractions of a town even yet the delight of the holiday-maker and the benefactor of the invalid.

DEPUTY SURGEON-GENERAL HOME, V.C., C.B.

WE believe that in congratulating this officer on his recent promotion we are simply expressing the general opinion that he has thoroughly earned and deserved it. With a very commendable foresight of the arduous nature of the task before the medical service, and a desire to secure the right man, the Director-General, we believe, proffered the post of principal medical officer of the West Coast of Africa to Dr. Home, who, with characteristic pluck and energy, accepted it. The little cloud, which was only then ominously appearing in the political horizon, was laden with bigger events than most people supposed. During the time that Dr. Home has been on the Gold Coast he has been indefatigable in collecting data of all kinds, in improvising and settling his arrangements, and in attending sick, interrupted by the frequent calls to discharge arduous and responsible duties in the field. Dr. Home, who is described as a very delicate-looking man, possesses unquestionable ability and a long and varied experience, military and civil, combined with the energy of a steam-engine. He had shortly before going on this expedition been engaged as one of the inspectors on Mr. Simon's staff—a post he relinquished from failing health. His military medical services are as follows. He entered the Medical Department March 17th, 1848; served in the Eastern campaign of 1854-55, including the battles of Alma, siege and fall of Sebastopol (medal with two clasps and Turkish medal); employed during the Indian mutiny campaign of 1857-58 (medal with clasp and a year's service for Lucknow); served in the New Zealand campaign of 1865-66 (C.B., special promotion to the rank of Surgeon-Major, and medal). He was decorated with the Victoria Cross for persevering bravery and admirable conduct in charge of the wounded men left behind the column when the troops under the late General Havelock forced their way into the residency of Lucknow on September 26th, 1857.

ST. THOMAS'S HOSPITAL.

ON Thursday, the 18th ult., a microscopical *soirée* was given in the library of St. Thomas's Hospital by the president of the Physical Society, Mr. Wagstaffe. The attendance was large, including the treasurer, most of the hospital staff, and many old and present students. Several of the members of the staff kindly co-operated with the president in exhibiting a very select collection of specimens. Great satisfaction was expressed by all present at the success of the meeting, an ample supply of microscopes and lamps rendering the most common evils of *soirées* conspicuous by their absence. Among many other objects of real excellence we may mention an instructive section of the spinal cord by Mr. Croft, showing the multicaudate ganglion cells to perfection. Specimens of living Opalina in serum from the intestine of a frog, showed by Dr. Ord; and the phenomena of cyclosis in Vallisneria, and ciliary and amœboid motion, illustrated by Messrs. Wright and Jacob, attracted great attention. Mr. C. Stewart showed a complete vertical section of skin, differentially stained, of diagrammatic exactness; and demonstrated the epithelial lining of the renal Malpighian capsules by specimens stained with nitrate of silver. Syphiloma of lung and ossifying cartilage were exhibited respectively by Drs. Payne and Greenfield. Mr. Rainey illustrated diffusion in liquids by coloured experiments, and showed the artificial production of shells in carbonate of lime. Dr. Evans exhibited specimens of urinary crystals and a very fine section of kidney, showing part of the structure invaded by early tubercle. Mr. Arnott's table illustrated very completely the histology of cancer. In the Physical room adjoining, Dr. Stone gave some most attractive demonstrations of spectroscopic and polariscopic phenomena. Other members of the staff lent a very interesting series of surgical photographs, illustrating some results of both civil and military surgery; and some of the most admired objects of the evening were the stereoscopic slides, chiefly of statuary and landscape, lent by Messrs. Murray and Heath, of Jermyn-street.

THE REV. PROFESSOR HAUGHTON, M.D.

WE congratulate both the Royal College of Surgeons of Ireland and the Rev. Dr. Haughton on the fact that the Honorary Fellowship of the College has been conferred on a worthy recipient by a unanimous vote. As remarked by the President, Dr. Denham, the Honorary Fellowship of the College of Surgeons of Ireland is an honour but rarely conferred, and its value is therefore all the more highly appreciated, there having been altogether but sixteen honorary Fellows, among whom were Cloquet, McGrigor, and Tiedeman; and, in more modern times, we may add Syme and Bowman. Dr. Haughton, though not a practising surgeon, is well worthy to be classed with the greatest of dead or living anatomists, for no man has done so much to apply the geometrical and mechanical knowledge, of which he is so great a master, to the elucidation of anatomical problems. The years which Dr. Haughton has devoted to the scientific study of anatomy have not been thrown away, for they have enabled him to trace out many great laws of life, and to foster a spirit of scientific inquiry among the younger anatomists of the day. We trust that he may yet be spared many more years in which to complete the great work he is engaged in of rendering Trinity College, Dublin, a great centre of scientific training for the rising generation of his countrymen.

HOME FOR INVALID LADIES AT CLIFTON.

A HOME for Sick Ladies has, we are informed, been for some months past in operation at Clifton, near Bristol, which will afford to ladies of the professional classes and others of small means an opportunity of obtaining, at a moderate cost, good medical advice, nursing, and comfortable lodging, which are too often out of their reach, and the want of which is specially felt when prevented by continued illness from continuing their bread-winning occupations. In such cases, indeed, they are frequently deprived of advantages which the poorest sections of the community can command in our hospitals. We learn therefore with great satisfaction that Clifton is now provided with a Ladies' Invalid Home similar in scope to those of Harley-street, Scarborough, Torquay, &c., and we purpose to-day to bring its existence to the knowledge of our readers, under the impression that some of them may be glad to recommend it to patients who require change of air, or who are unable otherwise to provide themselves with prolonged medical attendance and nursing. The Home is at 25, Richmond-terrace, Clifton, and affords all necessary advantages and conveniences. The salubrity of Clifton is well known,

and the Home itself is situated in an elevated, open, and quiet spot. It is well raised above the ground, and opens upon a good paved terrace, facing south and west, which offers a dry walk to those able to take exercise. Several of the most eminent physicians and surgeons of the place have most kindly consented to give their services gratuitously when selected to attend.

The lady superintendent residing at the Home will gladly reply to all inquiries about terms, rules, &c., which sick ladies or their friends may wish to make.

ORIGIN OF PUS-CORPUSCLES IN INFLAMED CORNEA.

A LONG paper on this subject is contributed by Professor A. Böttcher to the last number of *Virchow's Archiv*. Cohnheim, it is well known, maintained that simple traumatic keratitis always commences at the periphery of the cornea, and extends from thence to the centre, and that, however large may be the number of pus-corpuscles accumulated at any point, the fixed corpuscles of the cornea remain essentially unaltered; in other words, he derived the pus-corpuscles which appear in keratitis essentially from the white corpuscles of the blood. Böttcher elaborately discusses this question, and gives the results of many experiments he has himself performed with a view of elucidating the question. He used chloride of zinc moderated with nitrate of potash, with a point of which he touched the middle of the cornea in a number of frogs. It would take up too much space to give the details of his experiments, but it may be stated that his results are unfavourable to the views of Cohnheim, for he finds he is able to produce a limited keratitis at the centre of the cornea without the occurrence of any marginal or peripheric zone of haziness in the cornea, and, secondly, he has found that in such cases the fixed corpuscles of the cornea are always modified.

RESIGNATION OF A MEDICAL OFFICER OF HEALTH.

THE Medical Officer of Health for the borough of Bolton, Dr. Livy, has tendered his resignation, assigning, in a letter to the Sanitary Committee of the borough, the following reasons for taking this course. He has found, he states, that the efficient discharge of the duties of the office requires more time than he anticipated, or that he has at his disposal. He feels also that he has been obliged, in the interest of the public health, to condemn property against the wishes of, and without full and ample compensation being awarded to, its owners. "Some of these owners," he writes, "are poor and advanced in years, others are orphans entirely dependent upon it for their maintenance. I consider," adds Dr. Livy, "that the rights of a solitary individual are as sacred as those of a million, and that the law is never so odious and hateful as when it is made the instrument of oppression and injustice. I have therefore a decided objection to continue in an office where, even for the best of objects, I am compelled unjustly to deprive persons of property which has hitherto received the sanction and the protection of the law."

FRANCIS C. WEBB, M.D. EDIN.

MEDICAL journalism has lost an able representative, and the profession a deservedly popular member, in this accomplished and amiable physician, who died at his post on the day before Christmas. He had been for some time sub-editor of the *Medical Times and Gazette*, and had worked so well in that capacity that on the temporary withdrawal of Dr. Druitt he at once succeeded to the editorial chair. Of the skill and knowledge with which he fulfilled his duties it is not for us to speak; but we must bear pointed testimony to the admirable temper and good taste with which he managed his journal, amid discussions and controversies too trying for the maintenance of similar qualities in more than one of his contemporaries. His death was as sudden as it was sad, and must have chilled the enjoyment of many a family circle at this festive season. On the evening of the 23rd ult. he had dined hurriedly after a day's severe work, and had gone to the printing-office to read the proofs, the last of which was, we believe, that of a summary of the chief events of the medical year. Having seen the paper to press, he returned in high spirits to his house in Woburn-place to assist in arrangements for the reception of a numerous gathering of friends. He retired to bed at the usual hour; but early on Wednesday morning he was seized with cardiac symptoms of a distressing kind, from which he never rallied. Death rapidly supervened, removing from a wife and ten children an exemplary husband and father, and from the profession a loyal vindicator, at the early age of forty-seven.

THE SKIRMISH AT FAYSOO.

IN the late skirmish at Faysoo, which might easily have been attended with disastrous consequences to the force engaged under Colonel Wood, our native allies acted their well-known part of running away just when they were most of all required to exhibit a little firmness. A few, and but a few, stores fell into the hands of the Ashantees, but we are very glad to learn that these did not comprise any articles of hospital equipment, all of which were saved and successfully carried off by Surgeon-Major Mosse, in whose more immediate charge they were. As Lord Derby well said, this is "an engineers' and doctors' war"; and the doctors have had to play a very prominent part in it, and seem to have played it admirably so far. The medical and sanitary arrangements both at home and abroad are described as being very good; and the medical officers on the Coast have been indefatigable in their exertions. A large and disproportionate number have sickened from exposure and hard work, one army surgeon is reported to have been killed, but this report is not confirmed, and another has been twice wounded. So far, then, the doctors have more than shared the dangers of the campaign.

THE VICTOR EMANUEL.

THIS hospital ship arrived on the 17th December at St. Vincent, and left the following day for Cape Coast Castle. We learn from a correspondent that the voyage so far has been a good, if not an expeditious one; that the weather was rough at the outset, and they had to avoid Madeira and Teneriffe. The health of all on board was excellent; and the men of the army hospital corps had worked willingly in completing the equipment of the hospital deck, which is described as presenting a very light and cleanly appearance, owing to the masts, funnel, pillars, capstan bars, buckets, &c., having all been painted white under the directions of the first lieutenant. It is intended to have all the sick cots on this deck ready at Sierra Leone, so as to receive 142 patients on board, if necessary, immediately on the vessel's reaching Cape Coast.

HISTOLOGY OF THE SUDORIPAROUS GLANDS.

THE sudoriparous glands of the palm of the hand and of the skin of the head are stated by Professor W. Krause (*Centralblatt*, No. 52, 1873) to have a single layer of columnar epithelium lining them throughout their entire extent. In order that this may be shown clearly, rather complex treatment is required. The skin should be treated successively

with chromic acid, alcohol, and hæmatoxylin, and very fine sections should then be made. The hæmatoxylin solution is best prepared as follows, when it offers the further advantage of not being liable to decomposition: decoction of logwood, 30 to 60 parts; alum, 5; chromate of potash, 0·1; creasote, 0·2: filter. When good sections have been made they are subjected to the action of absolute alcohol, oil of cloves, and Canada balsam dissolved in chloroform. All the glomeruli are invested by a sheath of muscular tissue; the muscular fibres are short, thin, and separable by hydrochloric acid.

THE ANNUS MEDICUS OF 1873.

WE omitted, in our summary of the events of 1873, to mention two or three facts of interest in connexion with the College of Physicians. The re-election of Dr. Burrows to the presidency, for the second time, marked the high opinion of the Fellows as to the way in which Dr. Burrows has served and represented the College. The College, like the College of Surgeons, passed a resolution condemning the practice of medical authors frequently advertising their own works in non-medical journals. The Baly medal was given to Dr. Sharpey in recognition of his labours for the advancement of Physiology, just after his recovery from a successful operation for cataract. The disposal of the medal and the success of Mr. Streatfeild's operation gave great delight to the profession. The Harveian Oration was delivered by Professor Rolleston, who reviewed recent advances in the anatomy and physiology of the circulating apparatus, and ably vindicated the claims of Harvey against all rivals. The Lumleian Lectures, delivered by Dr. Robert Barnes, on the Convulsive Diseases of Women, fully reported in our columns, were worthy of the high reputation of their author, and contain ample proof of the advantage to pathology and practical medicine of having medical subjects looked at from an obstetrical point of view. Only Dr. Lee and Dr. West, of obstetric physicians, have preceded Dr. Barnes in giving the Lumleian Lectures.

A STUDENT'S LIBRARY.

MR. MUDIE, it appears, is about to confer a great boon on students of science by the establishment of a reading-room and library, accessible to all on the yearly payment of two guineas. The privileges of each may be had separately on the annual subscription of one guinea. Henceforth no aspirant after academic honours or professional proficiency need be deterred by the costliness of the requisite books. Expensive as these are, and—in medicine particularly—liable to be superseded every year or two with the advance of science, they will now be within reach of the most modest purse. To those students especially who come up to town from the country to obtain a metropolitan degree or qualification, a few months judiciously spent in Mr. Mudie's reading-room, supplemented by the books they may take home from the library, will greatly facilitate the satisfactory attainment of the desired object.

DR. BEAUPERTHUY'S TREATMENT OF LEPROSY.

WE learn that an experimental trial has been made of Dr. Beauperthuy's system for the cure of leprosy at the St. Lazare Hospital, in the Mauritius. The results, however, have been anything but hopeful. Out of six cases subjected to the treatment, one only had afforded some small ground for satisfaction. In consequence of some reports submitted to the Royal College of Physicians of London, Lord Kimberley proposed to the Government of Mauritius and other colonies that Dr. Beauperthuy's remedy should be fairly tried. A commission, composed of the chief medical officer as president, and Drs. D'Arifat and Poupinel de Valencé, was nominated to study the effects of the new treatment at the St. Lazare Hospital, with the results already stated.

THE GREAT NORTHERN HOSPITAL.

WE are informed that the Great Northern Hospital has discontinued, or is about to discontinue, the out-patient department, with the exception of obstetric and ophthalmic cases. This change may gratify those who see in out-patients only hypocritical pretenders to poverty, and in the out-patient department only cursory and slipshod practice. But, in our opinion, the change will require justification. The hospital is situated in the midst of a large population not over-supplied with dispensaries or other medical charities, and, though there may have been some abuse of the out-patient department, there is no doubt it will be greatly missed by many needy people above the grade of paupers. Moreover, a hospital without an out-patient department affords a very imperfect clinique. To close such a department when there is a very general sense of the difficulty of teaching students the more ordinary and important parts of medical practice is greatly to reduce the value of the hospital as a place for observation and education, should it come to be needed for such purposes. We shall look curiously for any statement of the reasons for this step.

NEW FOSSIL MAN.

IN the *Revue Scientifique* for December it is stated that a third skeleton of a troglodyte has been discovered by M. Rivière in the caves of Mentone. This new skeleton, judging from the various and numerous implements by which it was surrounded, lived at an epoch far more remote than that assigned to the skeleton now in the Museum of Paris. The instruments of warfare and other objects found with it, though composed of flint and bone, are not polished. They are only sharpened, and by their coarse execution appear to belong to the palæo-lithic age. On the upper part of the skeleton was a large number of small shells, each pierced with a hole, which appeared to have formed a collar or bracelets. No pottery nor any bronze object was found.

ILLNESS OF THE EMPEROR OF GERMANY.

WE are glad to be enabled to state that up to the present date the condition of his Imperial Majesty the Emperor of Germany is not such as to cause very great anxiety. The illness commenced with a slight catarrh, which took the form of influenza, an affection which, when the subject thereof arrives at the age of seventy or eighty years, is by no means trifling. It is not, therefore, probable that his Majesty will for some little time take any very active part in the conduct of public affairs.

LONDON HOSPITAL MEDICAL SOCIETY.

ON December 18th the first meeting of this new Society was held in the anatomical theatre of the College. Between thirty and forty students attended, and after a chairman and secretary were elected, Mr. L. McKenzie read a paper on Apoplexy, and Mr. Withers one on Spontaneous Version. Both called forth a brisk discussion. The Society is limited to London Hospital men, and has for its object the discussion of medical and scientific subjects, and the encouragement of the study of pathology and histology.

TERMINATION OF NERVES IN THE LIP.

DR. PALLADINO (*Bull. dell' Assoc. dei Natural. di Napoli*) states that in the lips of the horse, which are very richly supplied with nerves, many isolated, non-medullated fibres

run from the subcutaneous connective tissue into the deeper layers of the epithelium, where they have a straight course and terminate by free extremities after they have traversed the deepest layer of the pavement epithelium, occasionally exhibiting a terminal dilatation or enlargement. Palladino has not been able to discover any connexion of the nerve-fibres with peculiar stellate cells of the rete Malpighii, as described a year or two ago by Langerhans.

THE mortality from small-pox has lately been very high in Kilmarnock. A recent house-to-house visitation disclosed the existence of the disease in forty-four houses, the total number of patients in which were sixty-six. There were, besides, eighteen patients in the local hospital. We are glad to observe that the Public Health Committee of Corporation and the medical officer of health, Dr. Borland, are taking active steps to limit the progress of the disease. The protective power of revaccination should be made known to the inhabitants of the town, and facilities given them to avail themselves of the operation.

THE Local Government Board has refused to sanction the appointment of Mr. Sidney Johnson, of Dalton-in-Furness, as medical officer of health for the urban sanitary district of that name. The sanction has been refused on the ground that Mr. Johnson is not in independent practice as a medical man, but that he is an assistant to Mr. Edward Hall, of Dalton. Mr. Johnson, according to the Medical Register, is a Bachelor of Medicine and Master of Surgery of the University of Aberdeen.

A SINGULAR case of wholesale poisoning has just occurred in Montreal. A large bottle of vinum colchici, which, as our readers know, is prepared by macerating colchicum corms in sherry, was stolen from a waggon, and of this preparation, the extreme medicinal dose of which may be put down as thirty minims, eleven men freely drank, under the impression that it was ordinary wine. Seven of the unfortunate men died in the course of a few hours.

ACCORDING to the monthly report of Dr. Frankland, the river waters distributed by the metropolitan companies during the month of December were efficiently filtered, and were clear and transparent when drawn from the mains. The quality of the Thames waters exhibited in each case a marked improvement upon that which had been supplied during November, whereas the quality of the Lea water supplied by the East London Company had deteriorated.

ENGLISH dermatology cannot be said to have stood very high of late years in the estimation of our foreign *confrères*, but a compliment has just been paid it in the reproduction of Dr. Tilbury Fox's work for the second time in America, and the issue in separate parts of an Italian edition, edited by Dr. Anton Longhi, which, when completed, will form one of the series of the "Bibliotheca Medica Contemporanea," published by Vollardi, of Milan.

THE judges appointed by the Royal Agricultural Society to examine the essays of competitors for the prize of £100 offered by Lord Cathcart for the best treatise on "The Potato Disease and its Prevention," have reported that among 94 papers not one has been found worthy of the prize.

A CHRISTMAS-TREE for the delectation of the children and other inmates of King's College Hospital is being prepared with great care and energy on the part of all concerned, and will be exhibited on Wednesday next, the 7th inst.

WE are glad to notice, according to the report of the Sanitary Commissioner for the Punjab for the week ending 11th October last, that the health of the province is improving, the decline in the death-rate being very general. Amritsar is, however, an exception, for there the death-rate is excessive, and shows a tendency to rise. Delhi and the small towns in that district are also still very unhealthy.

DR. REDWOOD, public analyst for Clerkenwell, has issued his first report, from which we find that he has already analysed 100 articles, comprising tea, coffee, bread, butter, milk, sugar, arrowroot, mustard, pepper, vinegar, rhubarb, calomel, carbonate of soda, and tartaric acid. No poisonous or noxious intermixture was detected in any of the samples, although many of them were adulterated.

A "DISTRICT asylum officer," writing to the *Freeman's Journal*, points out the inadequacy of the salaries of medical superintendents of lunatic asylums in Ireland, and after quoting statistics to show the disparity of their stipends as compared with what their English brethren receive, advises the officers of the Irish asylums to join in a simultaneous demand for a reconsideration of their salaries and claims.

A FORMIDABLE rival to the German Erbswurst has proved its virtues in the Russian expedition to Khiva. It is a biscuit composed one-third of flour of rye, one-third of beef reduced to powder, and one-third of sauerkraut also reduced to powder. Great relish for the food and excellent health from its use have been characteristic of the soldiers throughout the campaign.

DR. JOSEPH DALTON HOOKER, of Kew Gardens, who has succeeded Sir George B. Airy as President of the Royal Society, is a son of the late distinguished botanist, Sir William J. Hooker, of Glasgow. Dr. Hooker, on the death of his father, in 1865, was appointed director of the Botanical Gardens, Kew.

THE monthly report of the Homerton Fever and Small-pox Hospital shows that on the fever side 48 cases had been admitted, 58 discharged recovered, 5 had died, and 93 remained under treatment, as against 108 a month ago. The total treated in the asylum since October, 1871, was 1288.

ACCORDING to a recent return of army recruits presented to the House of Commons, we observe that during the year ending 30th June last, 258 recruits were objected to by commanding officers, 141 of that number being discharged, and the remainder (117) retained in the service.

ANOTHER Waterloo veteran has passed away in the person of Mr. Henry Terry, of Northampton, who was under fire in the great battle as assistant-surgeon 14th Foot Regiment. Mr. Terry, who was in his eighty-fourth year, held the office of alderman for Northampton.

A LARGE barque arrived off the Scilly Islands about ten days ago, and landed eight men helplessly ill with scurvy. The medical inspector of the Board of Trade has been directed to hold an official inquiry on the causes of the outbreak.

DR. W. T. GAIRDNER, has been appointed President, and Dr. Joseph Coats Vice-President, of the Glasgow Pathological and Clinical Society.

IT is proposed to establish a Children's Hospital in Cork.

Correspondence.

"Audi alteram partem."

THE FELLOWSHIP OF THE COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—In your leading article on this subject to-day, you express your inability to say what may be the precise object which I had in view in proposing, at the last Council meeting of the College of Surgeons, that members of the College of two years' standing should be admissible to the examinations for the Fellowship; though, as you proceed to observe, you cannot but suspect some occult reference to the University of Cambridge. You will therefore, I doubt not, permit me to state the reasons which induced me to bring forward the motion in question.

The objects contemplated by the charter of the College in instituting the class of Fellows appears to have been, first, more effectually to promote and encourage the study and practice of the art and science of surgery, and, secondly, to form an elective body by whom and from whom the Council of the College should be chosen. The candidate for the Fellowship is accordingly required by the charter to have attained the age of twenty-five, and to have passed such examinations and complied with such rules as the Council shall, from time to time, consider expedient.

Under the regulations made by the Council and now in force, not more than twenty gentlemen annually pass these examinations and proceed to the Fellowship. Last year the number was nineteen, whereas the number of Fellows deceased during the year was thirty-three. It is evident, therefore, that neither of the objects contemplated under the charter is thus being attained. The study and practice of surgery are very little promoted, and the elective body will ere long, unless some alteration is made, dwindle to a very select circle.

The regulations to which I refer are, that no member of the College can present himself for the examination for the Fellowship unless he has, in addition to the requirements for the membership, passed a preliminary examination in Greek and French or German, has dissected during a third winter session, has been engaged for two years in the acquirement of professional knowledge in recognised hospitals and schools, has attended a course of lectures on comparative anatomy, and has performed operations on the dead body under the superintendence of a recognised teacher. Whatever may be thought of the desirability of such defined requirements of additional education, it is quite clear that they, in great measure, defeat their own purpose of promoting the higher education of surgeons, if they are of such a nature that by far the greater number of the members of the College cannot possibly comply with them; that, indeed, only the favoured few who are able to linger about the hospitals and schools for two years after they have attained the membership can present themselves for the examinations, and that all the remainder are deprived of that stimulus to prolonged and higher study which the prospect of the Fellowship examinations, and the honour of passing them, would afford. That this is now the case is proved by the fact that so few do, under the existing regulations, proceed to the Fellowship by examination. It is obvious that, except in very rare instances, it is absolutely impossible for the members of the College to comply with the regulations. However great their willingness to continue their studies and prepare for the examinations, they cannot do so in the prescribed manner. They must pass into the active, responsible, remunerative work of life. They must leave the medical schools, in which alone, be it observed, they can fulfil the required conditions, and proceed to the various provincial towns and villages. Perhaps they are elected surgeons to provincial hospitals—in Exeter, Leicester, and Norwich; still they are under the ban. They cannot comply with the regulations, and they cannot therefore present themselves for the Fellowship. Is it then right that such excluding regulations (which, by the way, are almost peculiar to the College of Surgeons) should be maintained; and ought the great mass of the profession in England to be thus debarred from the inducement to higher education and higher position which the Fellowship of the College was intended to offer?

True, there is a clause enabling any member of the College, after the expiration of eight years from his diploma, to be admitted to the examination for the Fellowship. But this is little more than a mockery; for how rarely at that period of life is a man justified in presenting himself for such an examination as that for the Fellowship is and ought to be! How rarely should he be encouraged to run the risk of subjecting himself to such a test. How rarely is it worth his while to do so. How rarely do the members avail themselves of this clause; and how bitterly have some repented the attempt.

The effect of my proposal would be so to alter this clause that *two* years would stand instead of *eight*; and then, instead of being, as I have called it, a mockery, the clause would bring the Fellowship within the range of every one of the members who should be at the pains so to prolong and extend his reading for two years after his diploma as will render him equal to pass the examination for the Fellowship. To do this during the first two years of professional life would be possible, indeed a pleasure, to many to whom the effort after the lapse of eight years would be out of the question; and the effect of the stimulus to additional education thus offered to all the young members of the College might indeed be expected to "promote the study and practice of the art and science of surgery," and to confer an incalculable benefit on the profession and the country.

My desire, in short, is to bring the regulations for the Fellowship of the College of Surgeons, in this respect, into resemblance with those for the higher degrees and diplomas of the Universities, and nearly all the other medical licensing bodies in the kingdom, and to admit all who have obtained the lower diploma, after a certain reasonable period, to present themselves for the examination for the higher diploma, without requiring that they should have conformed to any additional special curriculum of study. Provided, that is to say, the members come up to the additional required standard of knowledge, I would admit them to the Fellowship without asking any questions as to the manner in which they have obtained their knowledge; and I would place the time at which they should be admissible to the examination at such a distance from the examination for the lower diploma as will bring the opportunity of preparing themselves within the range of the many, as well as of the few, and yet will necessitate such a prolongation and advance in the scientific study of the profession as will ensure that the Fellowship is not an unmeaning title, but carries with it the guarantee of superior professional knowledge. I have proposed *two* years as the shortest period to intervene between the membership and the examination of the Fellowship, instead of the *eight* years required. Perhaps *three* years might be thought better; but it must be remembered that the longer the period required, the smaller will be the number of those who can or will make the effort, and the less widely diffused therefore will be the benefit of the system.

It has ever been a great regret to me that the institution of the Fellowship has done so little, and promises so little, to attain the good ends which those who were instrumental to it had in view. I have long thought over the impediments to its greater and wider influence; and I know that many of the members of the College, especially of the younger members residing in the provinces, agree with me that some such alteration as I have proposed ought to be introduced. That the Council of the College are not uninfluenced by a similar view is shown by the fact that they referred the question to the consideration of a committee.

I have shown that I had some reasons, whatever validity you may attach to them, for my motion, and that in bringing it forward I was actuated by the desire to promote the interests of the great body of the members by opening up to them the stimulus to a higher education and the opportunity of placing themselves upon the elective and governing bodies of their College; and I hope it will be apparent that your suspicion of an occult reference to the University of Cambridge is altogether without foundation. Indeed a more careful consideration of the regulations for the Fellowship would have shown you that the facts point the other way, that the University would be a loser rather than a gainer by such a change as I propose, and that my zeal for my University had, in this instance, to be subordinated to my zeal to promote what appears to me to be the true interests of my profession. Indeed, I trust that in the Council room of the College of Surgeons I have never forgotten that I am the representative, not of the University of Cambridge, but of the Fellows of the College who handsomely placed me in that honourable and

responsible position without solicitation on my part, and without demanding a programme of my views; and I do not forget that the great duty of the Council is to promote the education and the interests of the Members as well as of the Fellows of the College.

Anatomical Museum, Cambridge, December 20th, 1873. G. M. HUMPHREY.

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—In the article, "Annus Medicus 1873," in THE LANCET of Dec. 27th, p. 913, there is a comment on a letter of mine addressed to you, and published in THE LANCET of August 9th, 1873. A part of that comment, it appears to me, is written under misapprehension.

You observe:—"It would be manifestly impossible for the Director-General to carry on the duties of his department if every young surgeon were to have the right of retiring *when appointed to a sea-going ship* because he found, as all must find, that time was required for the acquirement of 'sea-legs,' and that life on board ship had its drawbacks as well as its pleasures. We observe that quite recently a deputation from the British Medical Association had an interview with Sir Alexander Armstrong upon the subject, and were convinced by him that, with every desire to meet the wishes of young surgeons, it was undesirable that discipline should be so completely relaxed *as was demanded by Sir Dominic Corrigan.*"

I never proposed or advocated that navy surgeons should have the *right* of retiring "*when* appointed to a sea-going ship," but I did object to the course of refusing leave to retire to a surgeon not appointed to a sea-going ship, of subsequently appointing him to a sea-going ship, and then putting forward the subsequent appointment as a justification for the previous refusal.

I did not desire "that discipline should be so completely relaxed." I only argued that navy surgeons should be permitted to retire as army surgeons, as all other officers, when not on active duty, are allowed to do; that they should not be treated worse than their fellow officers in all the branches of the service. I think they ought not, and I hope the publication of my letter of August last in THE LANCET may relieve navy surgeons from the very serious grievance which brought forth my letter—viz., that a navy surgeon who had not seen active service in a sea-going ship, but who had been kept by the naval authorities from his entrance into the service on harbour duty, should be refused permission to resign because he had not been on active service in a sea-going ship, although he never had the opportunity of being in a sea-going ship. I have given the particulars of such cases in my letter already referred to.

I hope you may now admit that I did not "exaggerate" the grievance complained of, that I did not "demand" that discipline should be "completely relaxed," and that I did not desire anything unreasonable in demanding that navy surgeons should have equal rights with army surgeons, and all other commissioned officers in her Majesty's service.

I am, Sir, yours &c.,

Dublin, Dec. 27th, 1873. D. J. CORRIGAN.

*** Sir Dominic Corrigan is a persistent though not a very judicious champion of his naval brethren. We, in common with others, rejoiced when the candidates for the naval medical service were admitted to equal rights with the sister services at Netley, and when it became the practice for the young naval surgeon to take a turn of duty in a naval hospital, so as to learn something of the routine of naval duty before embarking on board-ship. We fear that if a continuous agitation is kept up for the right of retirement before a surgeon has actually essayed to serve on board a sea-going ship, the Admiralty will be inclined to revert to the old practice of sending young surgeons to foreign stations at once, whilst freshly entered, with the result of lowering the scientific prestige of the entire service.—ED. L.

DR. BELL PETTIGREW ON VITALITY.

To the Editor of THE LANCET.

SIR,—In his letter to THE LANCET, of Dec. 13th, Dr. Bell Pettigrew still persists in affirming that the words I have used justify the inference that I entertain the ridiculous and untenable proposition that life *destroys* physical force. He pretends that his allegation is supported by a number of my statements which he quotes; but, of course, *in not* one of them does the word *destroy* occur. In many places I have distinctly repudiated this and some other ideas which Dr. Pettigrew and many opponents in this discussion about the nature of life have endeavoured to fasten upon me. All my work upon this matter favours the conclusion that *life* is not physical force, and that it neither makes nor destroys physical force. My work forces me to conclude that *life* is a power *per se*, which, absolutely differing from all material forces, properties, qualities, and functions whatever, may direct, change, govern, modify, but cannot *destroy* matter or force. Dr. Pettigrew wants your readers to believe that such words and phrases as "overcome," "transcend," "differ from," "distinct from," are equivalent to "destroy," and may fairly be interpreted by this word; but even Dr. Pettigrew will agree with me in the opinion that if he is "overcome," he will not necessarily be "destroyed." But my friend seems to be in doubt whether your readers will be quite convinced by the statements he has made, so he charitably suggests that my language may have been used by me to conceal my thoughts. After throwing such a stone, like many a brave boy, he runs away from the discussion, protesting that "want of time will prevent his saying anything more on the subject." It is unfortunate he had time to state that *life* supplied "part of the matter and force employed in building up an organism." Life can neither *supply* nor *destroy* any part of any matter or force whatever.

It is a matter of indifference to me whether living matter be called *protoplasm*, or *bioplasm*, or *plasm*, or *a* or *b* or *c*, so that the name or letter is used to denote only matter that *lives*. If, however, matter that lives is *protoplasm*, and matter that does not live is *protoplasm*, and matter that is boiled or roasted is *protoplasm*, matter in utterly different states, having essentially different properties, is called by the same name, and confusion worse confounded results. Some authorities want to confuse the *living* with the *dead*. Others hate the idea of *life*. But because I try to find out the differences between matter that is *alive*, and the same matter when it is *dead*, certain authorities seem angry, and try to make people believe that I hold doctrines which I do not hold, and assure them that my conclusions, which are really founded upon facts recently discovered, will most certainly be upset by conclusions that *will be* founded upon facts that *will certainly be* discovered by philosophers, who *will assuredly exist* at some future time when we shall all be dead and forgotten.

I am sorry to trouble your readers with a reply to the suggestion many times urged against my views by some of those opposed to me: "that although living matter appears structureless it does not therefore follow that *it is structureless.*" Of course it does not! It is quite possible that observers *about to be*, with the aid of microscopes *about to be*, may demonstrate in the time *about to be* structure in that which, to our eyes aided by the highest powers at our command, seems now perfectly structureless. No *structure* whatever is revealed in living matter by a magnifying power of 5000 diameters. But, of course, we may imagine with Tyndall that in the region *beyond the microscope limit* "the poles of the atoms are arranged, that tendency is given to their powers, so that when these poles and powers have free action and proper stimulus in a suitable environment, they determine first the germ and afterwards the complete organism"! This is very imaginative, and perhaps consolatory to those who have faith in imaginative science; but unfortunately for the rest of the world nothing decided is known about the "poles," nor the "atoms," nor their "arrangement," nor "that tendency," nor "their powers," nor the "free action" which the supposed "poles" and supposed "powers" are supposed to "have." Dr. Tyndall tells us nothing concerning the "stimulus" nor the "suitable environment," nor how the "germ, and afterwards the complete organism," is "determined." To such imaginative science there is unquestionably no limit, and it is certainly beyond the highest powers of the microscope, or any other powers yet discovered, to demonstrate its use. With regard to Dr. Pettigrew's remarks upon my views concerning the propor-

tion of the living matter of the body, I need say nothing here. He may be left to enjoy his fancy of "a man when he takes a walk, carrying four other men, equally heavy with himself, on his back," and to speculate upon the amount of vitality supplied and destroyed in the performance of such a feat.

I am, Sir, yours very truly,

Grosvenor-street, December 28th, 1873. LIONEL S. BEALE.

BLOODLESS OPERATIONS.

To the Editor of THE LANCET.

SIR,—In visiting the different hospitals in this city, I have observed that the application of elastic bandage is much employed to prevent hæmorrhage in cases of amputation, or other operations performed on the extremities. The surgeons, and yourself also (THE LANCET, Nov. 8th 1873, p. 673), entitle this procedure "the method of Esmarch," and give to this Professor the entire honour of the discovery.

Further. On the 21st of this month, I was present at University College Hospital when Sir Henry Thompson placed an elastic ligature around a mamma which is the seat of a large tumour, in order to perform amputation according to the so-called procedure of Professor Dittel of Vienna.

I believe it to be my duty as a surgeon, and as an Italian, to bring to the notice of my English brethren the fact that both the methods have been practised and publicly described for several years in Italy, and particularly by Dr. Grandesso-Silvestri of Vicenza, and Professor Vanzetti of Padua.

Dr. Silvestri published in 1871, in the *Gazzetta Medica Italiana*, (anno xiv., p. 397), that in cases of amputation he constricted the limb tightly above the part that was to be cut by means of an elastic band, the ends of which were provided with hooks so that they could be fixed without the aid of an assistant. Professor Vanzetti has latterly modified the procedure of Grandesso-Silvestri by bandaging the limb preliminarily. In a book published before Professor Esmarch read his communication to the yearly meeting of German Surgeons at Berlin, Vanzetti (*Cenni storici sulla Universita di Padua*, p. 163, 1873), wrote as follows:—"Following the example and instructions of the author himself (Silvestri), instead of using the tourniquet in amputations, we are accustomed to constrict the limb by means of an India-rubber band, and with so good results that ordinarily the stump does not lose a drop of blood. Before applying the elastic band, it is our custom to bandage the limb very tightly from its extremity to the point of amputation, and to keep it in an elevated position for several minutes in order that it shall retain as small a quantity as possible of venous blood.

It will be thus seen that Esmarch has only the merit of employing more generally a method already described and practised in Italy.

Billroth in the *Wien. Mediz. Wochenschrift* of July last, in regard to Esmarch's method remarks: "I read in a work of Vanzetti's that this procedure has been described in 1871 by Dr. Grandesso-Silvestri, and that since that time this method has been employed successfully in the Clinique at Padua."

In regard to the use of the elastic ligature in amputation of the mamma, and all the other applications of it made by Professor Dittel, in consequence, as he says, of an "accidental case" (*Allgem. Wien Mediz. Zeitung*, Nos. 7 and 8, 1873) I ought to state that Dr. Grandesso-Silvestri, in 1862, published in the above cited *Gazzetta Medica Italiana* an account of operations performed by means of the elastic ligature, and expounded scientifically the principles through which he had been led to adopt the method. I cannot do better than quote what he then wrote:—"In reflecting on the force which this substance (gum-elastic) exercises continuously and incessantly in order to return to its natural dimensions, I thought that it might be applied to further uses, and principally to cutting the tissues without producing dangerous hæmorrhages. In fact, a ring of gum elastic applied in a state of extension does of itself what an inextensible cord does when regulated by a screw-écraseur. Although slight, the pressure exerted by this substance is sufficient to obliterate the small capillary vessels, and to deprive the part with which it is in contact of the material elements of nutrition, and cause it to mortify by its incessant action. . . . . When this first thin layer has mortified, the elastic ligature exerts its power on the next, and continues thus to cut uniformly all the soft tissues. If in this march of destruction it meets a large vessel, before cutting it the internal surfaces are so applied against each other as to interrupt the current of blood, and before the coats are cut through obliteration will have certainly taken place."

After having thus so well explained the *modus operandi* of the elastic ligature on the tissues the author relates a case of nævus, of a vaginal polypus, and of a scirrhus of the mamma operated on with excellent success.

In the publication of 1871 (*loc. cit.*) he remarks that he has employed with good results the elastic ligature; (1) in occluding arteries after amputation; (2) in excision of varicose veins, angiom, and very hard fibroma of the uterus; also, from a single instance that he met with, he believes that the bones can be severed by the incessant and progressive action of the gum-elastic.

That, after his publication, the other surgeons in Italy employed his method is very clearly proved by what Vanzetti, Clinical Professor of Surgery at Padua, has written in the book I have quoted above, and which was published before Professor Dittel made his communication to the Medical Society of Vienna (Feb. 14, 1873).

Vanzetti writes: "In order to spare as much as possible bloody operations, where it is practicable, instead of the knife the elastic ligature is employed: and that since 1862, when this method, rational and not rarely very convenient, was introduced into surgical practice and published by Dr. Grandesso-Silvestri, pediculated tumours where they can be constricted at the base, hæmorrhoidal tumours, prolapse and fistula in ano, nævus, and fistulous sinuses, frequently, as has been exemplified in the practice of the inventor, and in this Clinique, find in this method a sure and bloodless remedy."

I am, Sir, your obedient servant,

DR. GESUALDO CLEMENTI (Naples).

London, November 29th, 1873.

SWEET SPIRITS OF NITRE.

To the Editor of THE LANCET.

SIR,—In a leading article in THE LANCET of December 6th, you speak well of private practice as a field for "clinical observation." It has occurred to me your readers might do good service to the public and themselves by giving their experience as to the value, as a therapeutical agent, of sweet spirits of nitre.

I see by the *Pharmaceutical Journal* that tons of this drug are sold every year, and although a very favourite medicine with the public, a very large portion is either used by medical men or in the dispensing of their prescriptions. The opinion you give in THE LANCET of December 6th, "that sweet spirit of nitre, whether made in the old fashion or new, is little worth, but when made by the blundering old process it possesses no value whatever," astounded me, for I remember, when a student, so important did Dr. Henry Thompson, the then Lecturer on Materia Medica at the Middlesex Hospital College, consider this medicine that, in the summer of 1860, he gave to the students of his class the mode of preparation and the uses of spiritus ætheris nitrici, as one of the questions for the written examination for the competition for prize and certificate of honour in Materia Medica. I have always believed the therapeutical effects of nitric ether to be, as Neligan states, a mildly stimulating diuretic, and that it renders the action of digitalis, squill, and other diuretics more certain.

Squire, in the eighth edition of his "Companion to the British Pharmacopœia, 1871," gives the medicinal properties of spiritus ætheris nitrosi as stimulant, diaphoretic, and diuretic; and these properties, I believe, belong also to the spiritus ætheris nitrici of the old London Pharmacopœia, and of which I prescribe a very large quantity in preference to the spiritus ætheris nitrosi, the older preparation being so much more palatable, and is consequently a very considerable item in my druggist's bill.

If I have been mistaken as to its efficacy I should be glad to know it, as probably would others of your readers; for if a drug is really inert, the prescribing it is worse than useless.

The question as to the worth of sp. ætheris nitrici P.L. or sp. ætheris nitrosi B.P. might, I think, be most accurately determined by those who are in the habit of prescribing or have been frequent prescribers of the drug, the action of medicines being perhaps better known by practical experience than by scientific reasoning. I would therefore suggest that every medical man should have the opportunity of replying to the following questions:—

1st. Do you prescribe sp. ætheris nitrici P.L. or sp. ætheris nitrosi B.P., or neither?
2nd. Is sp. ætheris nitrici or sp. ætheris nitrosi in your opinion a drug of any value?
3rd. What do you consider are the therapeutical effects of sp. ætheris nitrici or sp. ætheris nitrosi?

And let the result be communicated to the profession.

I am, Sir, your obedient servant,
FREDERICK H. ALDERSON, M.R.C.S.,

Southerton House, Hammersmith,
December 22nd, 1873.

CLINICAL OBSERVATION IN PRIVATE PRACTICE.

To the Editor of THE LANCET.

SIR,—In reference to your remarks in THE LANCET of December 6th, concerning Mr. Prescott Hewett's address at the Clinical Society on the Value of Medical Observation in Private Practice, will you allow me (as taking great interest in the subject) to give my experience?

It is generally agreed that every medical man should record any case coming under his notice, if only to refresh his memory to promote facility in treatment; yet, as it seldom happens that one doctor attends the same patient through life, such notes would be but partial, and thus valuable experience lost. The suggestion I make, and have advocated before, is, that each medical man should make or add his account for the perusal of his successor, so that, as far as possible, a connected account such as you advise should be on record.

In endeavouring to carry out these views, I have found that patients do not object, as a rule, to the registering of their complaints, being rather anxious that their maladies should receive a name; but to render the scheme practicable, it is necessary that there should be a corresponding desire among the professional men under whose care such cases may come.

With this object, "The Register of Health" I have framed contains particulars of name, date of birth, and diseases, often of consecutive interest, and entailing accuracy of observation ultimately of great service to the patient or friends. This register is in the keeping of the invalid, and is intended to be at the service of any medical observation, and at last presenting facts for notice otherwise unattainable.

I have now cases in which I am trying to carry out the plan with other co-operation, and hope soon to present you with some accounts to prove that such records are feasible. For any medical man in active practice to keep cases is simply impossible, and even these notes would be useless to others. In "The Register" a short entry would suffice and pertain to the case afterwards.

I should be happy to forward a form to any medical man, and should be interested in hearing the results.

I am, Sir, yours truly,
Lewisham-hill, S.E., Dec. 10th, 1873. FREDERICK H. SMITH.

PROFESSIONAL REMUNERATION AT PLYMOUTH.

To the Editor of THE LANCET.

SIR,—My attention has only to-day been directed to an article in your journal on Professional Remuneration at Plymouth. The letters on the subject which you had previously inserted, and which led to that article, I had intended not to answer in your columns, as it appeared to me that a matter of purely local interest could better be determined locally. The implication contained in your remarks that silence on the part of any of the physicians involved confession of the practices complained of in Mr. Swain's and Mr. Cutcliffe's letters removes the local element and compels me to reply. This can only be done by contradicting Mr. Swain's statement as far as I am individually concerned. The scale of fees in this neighbourhood is one of old standing, and has been handed down from generation to generation without alteration, and to this I strictly adhere. In cases of consultation, the fee has always been two visits for the guinea, and in private attendance a guinea for one, two or three visits according to the station in life of the patient, and the nature of illness, whether acute, requiring daily attendance, or chronic, with merely occasional visits. The lowest of these fees is too low, and I have endeavoured for some time past to avoid it, but any change in established usage is attended with considerable difficulty and requires time for its accomplishment. I can only speak for myself personally, and must leave my fellow-physicians to answer for themselves; but I cannot help thinking that Mr. Swain and Mr. Cutcliffe are under a decided misapprehension when they speak of four, five, or six visits for a guinea.

Yours, &c.,
C. ALBERT HINGSTON, M.D.

Sussex-terrace, Plymouth, Dec. 22nd, 1873.

BIRMINGHAM.

(From our own Correspondent.)

THE celebration of Christmas has not been neglected in our hospitals, and private munificence has supplied the patients in those institutions with a liberal hand. Christmas trees loaded with toys and bon-bons for the children's wards are general, and sufficient funds are provided from the gifts of visitors not only to keep the little people supplied with playthings during the ensuing year, but also to purchase books and warm flannel vests and mantles for the comfort and delectation of the adult patients.

Great and important changes have recently been made in the laws of the General Hospital. Governors, who have hitherto had the right of voting at any meetings of the Committee, are in future restricted from voting, although they may attend the meetings. The staff is to consist of five physicians and five surgeons, all having equal rights as to number of patients, division of duties, &c. By this alteration an additional physician will have to be at once appointed, and Mr. Jolly, who, as junior surgeon, has hitherto merely been surgeon to the out-patients, will have an equal number of beds with the other surgeons. This step was opposed by the senior physician and surgeon, who wished an increase of the paid rather than of the honorary officers, but it was carried by a considerable majority.

Mr. Burdett, who has for the last five years been a most active and intelligent secretary at the Queen's Hospital, having resigned, with a view of studying for the medical profession, an influential committee has been formed for the purpose of presenting him with a suitable testimonial, and already upwards of £40 have been subscribed. Dr. Leeson has expressed his intention of vacating the office of resident physician, which he has filled for the last two years. At the final meeting of the committee for carrying out the Periodical Collections for Local Charities, it was announced that the total amount paid into the bank since Hospital Sunday as the result of the collections was £5310 16*s.* 7*d.*, being an increase of £1199 10*s.* over any previous collection on behalf of the amalgamated charities.

Our stipendary magistrate, who has hitherto dealt much too leniently with those who have been proved to have offered diseased meat for sale, or to have sold adulterated articles, appears to have determined to adopt a more vigorous course with regard to such offenders. He has fined a farmer £20 for sending into the market beef unfit for human food, and also several grocers £1 and costs for selling tea adulterated with iron filings, plumbago, and other impurities. Nothing but stern and adequate punishment will deter such unprincipled persons from pursuing their nefarious and profitable practices.

The Hospital Reform Conference was attended by lay representatives of all the medical charities, and the subject having been thoroughly discussed, it was resolved—1. That a General Committee be formed for the purpose of inquiring into the fitness of applicants for hospital relief. 2. That the Committee consist of representatives of each medical charity. 3. That all applications for hospital relief be reported to the Central Committee for registration, and that the Central Committee make inquiries into such cases as it may deem necessary. 4. That pending inquiry, all cases be treated as at present. 5. That in all cases which, from information obtained, appear to be unfit to be treated, a form with details of such information be returned to the hospitals (within a week when possible), and that all hospitals should consent to receive the decisions of

the Central Committee as final upon the fitness, other than medical, of the cases investigated by them. 6. That in all cases which, from information obtained, appear unfit to be treated, a form with details of such information be returned to the hospital, and that each hospital be left to decide for itself upon the continuance of the relief. It remains to be seen whether the governing bodies of the various charities to which they have to be submitted will consent to the adoption of these rules, especially as they will involve an expenditure of not less than £600 per year.

Esmarch's plan of preventing hæmorrhage has been further tried; in addition to the cases mentioned by Mr. Gamgee, in his clinical note in THE LANCET, it has been used by Mr. West, with success, in a case of resection of the ankle-joint, in a boy æt. 17. No blood was lost, and a free view of the parts being gained, the operation was much facilitated. In a case of traumatic gangrene, necessitating amputation of the upper arm, death ensued in twenty-four hours, though the result was not probably influenced by the mode of operation used, as the patient was upwards of sixty years of age, and had fatty degeneration of both liver and kidneys.

At the Queen's Hospital there has recently been in the medical wards an unusually large number of cases of enteric fever and acute rheumatism: the latter being most successfully treated by Dr. Johnston by injections per anum of bicarbonate of soda, dill water being administered by the mouth. There have been four cases of aneurism, two of the transverse portion of the arch of the aorta, one of the aorta between the crura of the diaphragm, and another of the abdominal aorta; in all of which the symptoms were well marked, especially those of pressure. There is a very interesting case of aortic valve disease, with immense cardiac hypertrophy, in which the aggravation of symptoms, caused by a full stomach, has often induced the patient to go without food for twenty-four hours. There are several cases of myelitis, four of hemiplegia and paraplegia, and one of infantile paralysis: the last named being most successfully treated by means of the continuous current obtained from one of Mayer and Meltzer's 20-cell batteries.

Birmingham, December 27th, 1873.

LIVERPOOL.

(From our own Correspondent.)

IN the last number of THE LANCET it was stated that Sir W. Muir and Dr. Marston, of the Army Medical Department, were visiting Liverpool with a view of arranging for the reception of such invalids as may arrive at this port from the Ashantee Expedition. These arrangements are now completed, and will be carried out under the local superintendence of Mr. Reginald Harrison, subject to the direction of the War Office. It is not, I believe, contemplated that many invalids will return this way, as the bulk of them, and the more serious cases, will proceed by transports to the southern ports, where access to the great military medical centres, such as Netley, is more immediate and convenient. A certain number, however, may be expected by the regular mail steamers trading with the Gold Coast. Such invalids as arrive by the Liverpool route will be inspected on their arrival, when those that are sufficiently well will at once continue their journey. To meet the case of those unable by the severity or nature of their illness to proceed without further treatment, the authorities of the Royal Southern Hospital—the hospital nearest to the landing berth of the African steamers—have agreed with the Government to set apart six beds from the 1st of January to the 31st of March. Such invalids on their transference to the hospital will remain there, subject to the usual regulations of this establishment, until the hospital authorities report that they are sufficiently recovered to proceed to their respective destinations. Any cases of infectious disorders will be referred to the special hospital which has recently been erected in this town. It is believed that the arrangements which have been made will amply meet all that is likely to arise here.

During the last two or three months there has been more than the usual amount of mortality from fever on the African trading steamers, some of the vessels having suffered severely. For the most part, however, the sickness has occurred at places to the southward of Cape Coast Castle. Amongst the most recent victims may be mentioned the highly intelligent surgeon of the steam-ship *Benin*, Dr. Sexton, who, with two of his crew, died on board of remittent fever, during the early part of last month, after a few days' illness.

Referring to local matters, I must mention that the senior surgeon of the Royal Infirmary, Mr. Stubbs, has resigned his office, after having rendered good service to the institution for a period of nearly twenty-one years. His successor is not yet appointed, and some little delay may be occasioned in consequence of a question arising as to the length of time such appointment should be held. Formerly a limit of twenty-one years was placed upon the services of the physicians and surgeons; two years ago, however, the rule was altered, and the completion of the sixty-fifth year was substituted for the previous limitation. This alteration does not, by any means, find universal favour, as a proportion of the community, including many leading members of the profession, consider that the twenty-one years basis is the one which best consults the interest of the public as well as of the profession. The appointment of surgeon will, therefore, not take place until after the annual meeting of the trustees in January.

Liverpool, Dec. 30, 1873.

PARIS.

(From our own Correspondent.)

THE question of hospital hygiene is quite *à l'ordre de jour* here. Professor Bouchardat has chosen it for the subject of his lectures at the School of Medicine, and last week General Morin read a very interesting report at the Academy, in his own name and in that of Baron Larrey, on Mr. Galton's well-known report on the construction of hospitals. According to General Morin, the conclusions arrived at by Mr. Galton are in every respect the same as those indicated in Mr. Devergie's report, which had been drawn up for the Commission of Hygiene and the Medical Council of Hospitals appointed to investigate the subject in 1865. These conclusions were adopted by the Home Department, and from the basis of the code of regulations for hospitals, which is sent every year to the prefects of the departments. The rules proposed by Mr. Galton for the choice of a situation for hospitals, the extent of ground, the size of wards, ventilation, &c., are exactly the same, said General Morin, as those which are applied in France. One of the points on which the reporter strongly insisted as having been thoroughly demonstrated by Mr. Galton was the superiority of small hospitals over large ones, provided, of course, the limited number of beds is observed; and in connexion with this the reporter remarked that more cubic space between beds is exacted in France than even in England. The application of the above rules scarcely seems, however, to have engaged the attention of the municipal authorities of Paris and of the administration of the Assistance Publique when they decided in building the huge edifice of the new Hotel Dieu, such as it now stands.

In respect to Professor Bouchardat's lectures, there is much in them to interest all those who entertain modern and enlightened views on the hygiene of hospitals. They are full of important statistical information, and, when printed, will form a valuable book of reference. The Professor, however, has expressed views which will seem rather original to a great many. Thus, he attaches very secondary importance to ventilation and disinfection—perhaps I had better say to the improved ventilating systems which exist at Beaujon, Lariboisière, Necker, &c. According to the statistical tables drawn up by the Assistance Publique, and which form the documents on which M. Bouchardat has mainly grounded his views, the rate of mortality is not higher at La Charité and the Hôtel Dieu, which are badly ventilated, ill-situated, &c., than at the hospitals above-named. Professor Bouchardat thinks that there exists a far more important consideration than that of the hospitals themselves—it is that of the patients. These should be chosen and dispersed, and not gathered in the wards of any one hospital. The three categories of patients which most call for discussion are the wounded, puerperal women, and

children. Dr. Bouchardat thinks that they should be treated in town, and not admitted into the hospitals, or that, at all events, they should be so divided among the various wards as not in any case to form an agglomeration. Perhaps these views of the Professor require further development. I shall therefore return to them in my next letter, as this bare notice would scarce be doing them justice.

The sanitary condition of Paris is still excellent. Last week there were only 739 deaths in all; cholera and choleraic diseases being altogether absent from the municipal bulletin.

The Parliamentary committee appointed to investigate the project of law drawn up by Dr. Theophile Roussel (one of the members of the National Assembly) for the protection of childhood is busy at work. A few days ago Drs. Monod and Brochard, two of the medical men of France who have done the most through their writings and individual exertions for the saving of infant life, had a long interview with the committee, during which they expressed the results of their great experience on the subject. It is to be hoped that the committee will soon end its labours by the presentation of a good report, the results of which would be incalculable in a country where there is such waste of infant life.

Paris, Dec. 30th, 1873.

Medical News.

ROYAL COLLEGE OF SURGEONS OF IRELAND. — The following gentleman, having passed the necessary examinations, has been enrolled a Fellow of the College:—

Dr. Charles H. Robinson.

The licence in Surgery has been conferred on the following gentlemen:—

George D. Bourke, Arthur Butler, John H. Courtenay, Isaac B. Emerson, Thomas Enright, John K. Gentleman, Arthur H. Kerr, Francis Langan, Samuel T. Lewis, Osborne Limrick, Henry Longford, Charles E. Macnamara, Joseph Macnamara, Rawdon Macnamara, Charles Morrow, Edward J. Murtagh, Shapland H. Newell, Francis O'Flaherty, Alfred Patterson, John J. Pratt, Richard Ramsford, Louis William Rawson, Arthur W. Russell, Henry M. Scott, Ralph Stone, Agmon B. Vesey.

UNIVERSITY OF DUBLIN. — The following degrees have been conferred by Sir Joseph Napier, Vice-Chancellor, on the gentlemen named:—

DOCTOR IN MEDICINE. — John Peter Hamilton Boileau, Charles Edward Fitzgerald, John Magee Finny, Patrick John Moloney, Gilbert Smith, Arthur Law Wade.

MASTER IN SURGERY. — Samuel J. Barton, John B. Drapes.

BACHELOR IN MEDICINE.—Samuel J. Barton, George Bluett, John Joseph Greene, Chas. Nelson Gwynne, Francis John Hannan, Robert M'Bride, Charles E. De L. Mac Carthy, Henry Lyle Moore.

THE "Avenir d'Auch" states that the remains of a mastodon and other antediluvian relics were lately found near Condom.

PRESENTATION. — A very handsome miniature brougham has just been presented to Dr. Henry Adams, of Queen Camel, by one of his patients.

VACCINATION AWARD. — Mr. Ralph Goodall, of Silverdale, Staffordshire, has been awarded a grant (for the second time) of the sum of £52 19s.

HARVEIAN SOCIETY OF LONDON.—In consequence of the death of Dr. Fuller, the Society will not hold its conversazione this year. The annual meeting will take place on January 8th.

THE MEDICAL BENEVOLENT FUND. — The Committee of the British Medical Benevolent Fund earnestly appeal at this season to the profession for help towards the relief of the many cases of distress among their poorer brethren which continue to reach the committee from various parts of the kingdom. In addition to these urgent demands from the needy and destitute upon the department for immediate relief, the great desirability of increasing the slender amount to which the annuities are of necessity at present limited, and which ranges from £15 to £20, has especially pressed itself upon the consideration of the committee. Indeed, a glance at the cost of the necessaries of life will be sufficient to show the painful inadequacy of such a pittance, which, in not a few instances, is all the recipients can count on for their own. In view of this, a movement has been set on foot in the hope of obtaining a sufficient sum to enable the committee, by investment, to raise the incomes of the annuitants (in succession, as the fund permits) to £26, or say ten shillings a week; and a nucleus has been already kindly contributed, amounting to something over £150. The details of cases within the ordinary experience of the committee would amply support, in the strongest terms, this call for help. The committee, however, feel confident that, even without such, the good cause they advocate will plead for itself to the generosity of the profession at large, and will not plead in vain. Contributions, either to "the special fund for augmentation of annuities," or "for the general purposes of the charity," will be thankfully received by the treasurer, C. J. Hare, M.D., 57, Brook-street, Grosvenor-square; or by C. S. Webber, F.R.C.S., Hon. Financial Secretary, 1, Upper Berkeley-street West, Hyde-park, W.

Medical Appointments.

ADEY, H., M.B., C.M., has been appointed House-Surgeon and Dispenser to the Tiverton Infirmary and Dispensary, vice Taylor, resigned.

BARROW, B., F.R.C.S.E., has been appointed a Consulting Surgeon to the Royal Isle of Wight Infirmary, Ryde.

BARTON, J., M.B., C.M., has been appointed Demonstrator of Anatomy at Trinity College, Dublin, vice Little, appointed University Anatomist.

BERRY, J., M.R.C.S.E., has been appointed Medical Officer of Health for the Leyland Urban Sanitary District: £12 12s. per annum; acreage 3533; population 3830.

BROMLEY, J. B., M.R.C.S.E., has been appointed Medical Officer for District No. 5 of the Halstead Union, vice Andrews, resigned.

BROWNE, L., M.R.C.S.E., has been appointed an Honorary Surgeon to the Royal Society of Musicians.

BUDD, H. G., L.R.C.P.L., M.R.C.S.E., has been appointed a Medical Officer in Ordinary to the Worcester Dispensary and Provident Medical Institution.

BUSIGNY, C. E., M.R.C.S.E., has been appointed a Medical Officer in Ordinary to the Worcester Dispensary and Provident Medical Institution.

CLARKE, F. W., M.R.C.S.E., has been appointed a Surgeon to Sir John James's Charity, Bury St. Edmunds.

CLARKE, J. H., M.R.C.S.E., has been appointed Surgeon to the Highfield Division of the Sheffield Police.

CLOWES, F., M.R.C.S.E., has been appointed Medical Officer of Health for the Stalham Division of the Smallburgh Rural Sanitary District: £40 per annum; acreage 13,931; population 4040.

CONCANON, W. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for District No. 8 of the Bedminster Union, and Medical Officer of Health for Division No. 8 of the Bedminster Rural Sanitary District, vice Lloyd, deceased.

DAVIES, J., L.R.C.S.Ed., has been appointed Medical Officer for the Western Division of the Corwen Rural Sanitary District: £10 per annum; acreage 18,739; population 2661.

DE'ATH, R., M.R.C.S.E., has been appointed Medical Officer of Health for the Buckingham Rural and Urban Sanitary Districts: £100 for one year; acreage 62,000; population 13,000.

DIX, W. F., M.R.C.S.E., has been appointed Medical Officer of Health for the Smallburgh Division of the Smallburgh Rural Sanitary District: £42 per annum; acreage 15,721; population 4143.

DRINKWATER, J. P., M.R.C.S.E., has been appointed Medical Officer of Health for the Eastern Division of the Corwen Rural Sanitary District: £20 per annum; population 8014.

EALES, H., M.R.C.S.E., has been appointed House-Surgeon to the Birmingham and Midland Eye Hospital, vice Smith, resigned.

EAMES, J. D., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Wetwang District of the Driffield Union.

GOSDICKE, F. W. E. B., L.F.P. & S. Glas., has been appointed Medical Officer of Health for the East Ham and Little Ilford Division of the West Ham Rural Sanitary District: minimum salary £20 per annum.

GREENHILL, E. S., M.R.C.S.E., has been appointed Resident Accoucheur at St. Bartholomew's Hospital, vice Venn, resigned.

GREWCOCK, J. B., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Eckington District of the Pershore Union.

HALLAM, A., M.R.C.S.E., has been appointed Surgeon to the Central Division of the Sheffield Police.

HILL, H., M.R.C.S.E., has been appointed a Medical Officer in Ordinary to the Worcester Dispensary and Provident Medical Institution.

HINNELL, G. J., M.R.C.S.E., has been appointed a Surgeon to Sir John James's Charity, Bury St. Edmunds.

HOLLAND, H. F., M.D., has been appointed Medical Officer of Health for the Ampthill Rural Sanitary District: £70 for one year; acreage 41,551; population 17,536.

HUKE, S. T., M.R.C.S.E., has been appointed Medical Officer of Health for the Ludham Division of the Smallburgh Rural Sanitary District: £37 per annum; acreage 17,139; population 3668.

JEFFERISS, W. R. S., M.B., C.M., L.R.C.P.Ed., L.R.C.S.Ed. (late Parochial Medical Officer for Evie and Rendall, and Rousay and Egilshay), has been appointed Parochial Medical Officer for Stromness, Orkney.

KEMP, G., M.R.C.S.E., has been appointed Surgeon to the Broomhill Division of the Sheffield Police.

LEIGH, G. F., L.S.A.L., has been appointed Medical Officer of Health for the Hoylandswaine Urban Sanitary District.

LITTLE, C. E., L.R.C.P.Ed., has been appointed Medical Officer for District No. 3 of the Barnet Union, vice Linnecar, deceased.

LLOYD, W. H., M.R.C.S.E., has been appointed Medical Officer of Health for the Llandilo Urban Sanitary District: £10 per annum; acreage 300; population 1500.

MANNING, F. N., M.D., has been appointed an Examiner in the Faculty of Medicine of the University of Sydney, vice J. Macfarlane, M.D., deceased.

MAY, A. P., M.R.C.S.E., has been appointed Medical Officer of Health for the Little Crosby Urban Sanitary District: £10 per annum; acreage 1915; population 432.

MOOR, A., L.R.C.P.L., M.R.C.S.E., has been appointed Surgeon to the N Division of the Metropolitan Police, Leyton and Walthamstow, vice Drury, resigned.

OLDMAN, C. E., M.B., has been appointed Medical Officer to the Spalding Society of Odd Fellows, vice Ball, resigned.

OLIPHANT, J., M.D., has been appointed Medical Officer for the North St. Margaret District of the Leicester Union for one year.

PAIRMAN, R., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for Districts Nos. 1 and 2 of the Woodbridge Union, Suffolk, and Admiralty Surgeon and Agent, vice Turner, resigned.

PITTS, H. V., L.R.C.P.L., M.R.C.S.E., has been appointed Hon. Surgeon to the Liverpool Seamen's Orphanage, Newsham-park.

RUSHER, J. G., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Upton Snodsbury District of the Pershore Union.

SCOTT, T., M.D., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Ilkley Urban Sanitary District: no fixed salary; acreage 3061; population 2511.

SHAW, G. H., M.R.C.S.E., has been appointed Surgeon to the Attercliffe Division of the Sheffield Police.

SHERWOOD, A. P., L.R.C.P., M.R.C.S.E., has been appointed House-Surgeon to the Bedford General Infirmary, vice Johnson, resigned.

SMITH, R. A., M.D., has been appointed an Hon. Surgeon to the Sunderland and Bishopwearmouth Infirmary and Dispensary, vice H. J. Yeld, M.D., resigned, on being appointed Medical Officer of Health.

SMITH, R. S., M.D., B.Sc., has been appointed a Consulting Physician to the Bristol Dispensary, vice Lyon, deceased.

SPARKS, E. I., M.B., M.R.C.P.L., has been appointed a Physician to the St. George Provident Dispensary, Mount-street, vice Wegg.

STEWART, T., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Walkley Division of the Sheffield Police.

STONEHOUSE, C., M.R.C.S.E., has been appointed Medical Officer of Health for the Horsforth Urban Sanitary District: £15 per annum; acreage 2620; population 5300.

THOMPSON, T. J., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer of Health for the Beverley Rural Sanitary District: £60 per annum; acreage 75,910; population 11,226.

WALKER, J. R., M.R.C.S.E., has been appointed Medical Officer of Health for the Central Division of the Corwen Rural Sanitary District: £25 per annum; acreage 32,180; population 5771.

WILCOX, W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Bacton District of the Smallburgh Union; also Medical Officer of Health for the Bacton Division of the Smallburgh Rural Sanitary District: £24 per annum; acreage 10,841; population 2462.

Births, Marriages, and Deaths.

BIRTHS.

ATT'HILL.—On the 30th ult., at Waterbeck, Ecclefechan, Dumfriesshire, N.B., the wife of W. E. Blennerhassett Att'hill, M.R.C.S.E., L.R.C.P.L., of a daughter.

BLAKER.—On the 7th ult., at Robertsbridge, Sussex, the wife of Walter C. Blaker, M.R.C.S.E., of a daughter.

CALVERT.—On the 21st ult., at Brandes-Burton, Beverley, Yorkshire, the wife of Francis Calvert, M.R.C.S.E., of a son.

FOX.—On the 30th ult., at Harley-street, the wife of Tilbury Fox, M.D., F.R.C.P.L., of a daughter.

GLEN.—On the 18th ult., at South-bank, Yorkshire, the wife of James Glen, M.D., of a son.

HACKNEY.—On the 20th ult., at Warbleton, Sussex, the wife of Alfred H. Hackney, M.R.C.S.E., of a son.

KNIGHT.—On the 18th ult., at Shorleycroft, Keswick, the wife of Alex. A. H. Knight, M.D., of a son.

MOORE.—On the 10th ult., at Queenstown, the wife of Geo. Moore, M.D., Staff Surgeon H.M.'s Ship "Swiftsure," of a son.

SCOTT.—On the 16th ult., at Murray-street, Camden-square, the wife of David Scott, M.D., of a son.

TOMKINS.—On the 20th ult., at Euston-place, Leamington, the wife of A. Wellesley Tomkins, M.D., of a son.

MARRIAGES.

ARMSTRONG—THOMPSON.—On the 26th ult., at St. James's, Benwell, Newcastle-upon-Tyne, Henry E. Armstrong, M.R.C.S.E., Medical Officer of Health for the Borough of Newcastle-upon-Tyne, to Mary, second daughter of Mark Thompson, Esq., of Grainger ville, Newcastle-upon-Tyne.

DOUGLAS—MOIR.—On the 10th ult., at Edinburgh, A. Halliday Douglas, M.D., to Jessie Simpson, daughter of John Moir, M.D.

JOHNSON—RAINES.—On the 15th ult., at St. John's, Hull, Charles Hargitt Johnson, M.R.C.S.E., to Isabel, daughter of the late H. Raines, Esq.

DEATHS.

BAKER.—On the 15th ult., at William Henry-street, Liverpool, Thomas Baker, Surgeon, aged 37.

LOMAX.—On the 18th ult., suddenly, at St. Mary's-grove, Stafford, H. T. Lomax, M.R.C.S.E.

MAC DONALD.—On the 25th ult., at Barking, Essex, Agnes Ball Lorraine, wife of Alex. Ball Mac Donald, M.D., aged 25.

MARTIN.—On the 22nd ult., at Ipswich, Robert Martin, F.R.C.S.E., late of Holbrook, aged 81.

OGSTON.—On the 28th ult., at Aberdeen, Mary Jane Hargrave, wife of Dr. Alex. Ogston, aged 25.

PLUMBE.—On the 19th ult., Robt. Plumbe, of Leonard-place, Kensington, late Surgeon on the Madras Establishment, aged 70.

STUART.—On the 21st ult., at South-bank, Regent's-park (his residence for nearly forty years), Abel Stuart, M.D., formerly of Barbadoes, aged 78. His memory will long be affectionately revered by many grateful patients.

WALSH.—On the 12th of Sept., at Melbourne, Australia, William Walsh, L.K.Q.C.P.I., formerly of Walshfield, Co. Wexford.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, JAN. 1st, 1874.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 9 A.M.
Dec. 28	30·16	S.W.	43	46	...	48	40	...	Overcast
„ 27	29·82	N.	40	41	...	42	40	0·16	Overcast
„ 29	30·11	S.W.	...	30	...	41	27	0·04	Foggy
„ 30	29·95	S.W.	33	35	...	40	28	...	Overcast
„ 31	29·54	S.W.	48	49	...	50	33	0·08	Rain
Jan. 1	30·25	WNW	43	45	...	...	...	...	Fine

Notes, Short Comments, and Answers to Correspondents.

BERLIN UNIVERSITY.

FOR the winter half-year the statistics of attendance, just published, show that the total number of matriculated students is 1787, being 167 in advance of the previous half-year. Theology numbers only 173 students; Law, 560; Medicine, 333; and Philosophy, 681. Of these, 374 are foreigners—i. e., not Prussians, and 173 attend Philosophy. Besides the matriculated students, there are 168 medical students who attend lectures preparatory to medico-military service; while there are other 1648 entitled to attend the lectures. The total is thus raised to 3373. Theology has 5 ordinary, 1 honorary, and 5 extraordinary professors, and 5 privat docenten. Law has 10 ordinary and 3 extraordinary professors, and 3 privat docenten. Medicine has 13 ordinary and 13 extraordinary professors, with 37 private docenten. The Philosophical faculty is the most richly endowed, having 18 ordinary professors, 1 ordinary honorary professor (Dr. Lazarus), 33 extraordinary professors, and 23 privat docenten, with several other assistants.

Mr. F. W. Wilson, (Manchester.)—The cases of cholera that occurred at Augsburg last week have been strictly quarantined under a special ordinance, nearly all of them being recent arrivals from Munich. At the latter city the disease has diminished from its maximum of 50 cases to under 20 per day; but the epidemic is by no means at an end.

THE paper of *Dr. John Charles Hall* shall appear at an early date.

MAURITIUS AGAIN.

To the Editor of THE LANCET.

SIR,—I am glad to see that you have referred in your last issue to the sanitary condition of our rich and important colony of Mauritius; for, except something is done, the loss of life among its inhabitants will continue to be, as it has been since 1867, terrible and unequalled in modern times. If the truth now must be told, the resources of the colony are quite inadequate to so improve its sanitary condition as to allow its present enormous population to live without "poisoning" each other. The area of the island is 708 square miles, and the population, according to the census of 1871, was 317,000, and is increasing daily by the usual birth-rate, as well as by the introduction of large numbers of Indians from the three Presidencies, under five years' engagement to work on the sugar plantations; for the planters are either unable or unwilling to increase the wages to the amount that old and trained labourers require, or the latter, from their five years' experience of estate life, do not care to re-engage in sufficient numbers, so that they are cast on the population to rob, steal, starve, pollute water, soil, and air, and furnish suitable food for epidemics (for a return passage to India is not provided for them gratis, as in most other English sugar-producing colonies), and their places are filled by fresh hands from India, who can be engaged in that country at a low rate of wages, but, so far as the price of articles and the cost of supporting families in the Mauritius are concerned, a miserably insufficient one. This is the cause of the unhealthiness of the island, and it will continue to be till the Home or Indian Government puts a check on the tide of Coolie emigration, and not permit the Mauritian labour market to be controlled altogether by that of India—the circumstances of the two places differing essentially, and one class almost alone in the Mauritius (the planting) benefiting by this control. At any rate steps should be taken that the helpless and ignorant Coolie class is not crushed *in toto* in the struggle. The present Governor, Sir Arthur Gordon (son of the great Lord Aberdeen) saw this and other matters immediately after his arrival in the Mauritius, and hinted his views; but he was at once met with violent opposition from some of the planters and their friends. It is to be hoped, however, that he will not be frightened by abuse, but that he will by suitable measures put an end to a state of things that is a disgrace to our colonial system of government as a civilised power.

I am, Sir, yours, &c.,

December, 1873. NUMBER ONE.

P.S.—If you could get a Commissioner to report on the sanitary condition of the Mauritius, and on the hospital system generally, I could promise your readers strange revelations.

Mr. Charles Marsh.—The population of London within the registration limits at the census of 1871 was 3,254,260, whereof 1,533,151 were males, and 1,731,109 were females. Consequently the females were more numerous than the males by 207,958. At the census of 1861 the excess of females was 188,427.

A Discontented One.—No doubt our correspondent thinks he could do it better. Many people do until they try.

R. S.—We do not prescribe. Consult some respectable practitioner.

DOES CHOLERA ATTACK HORSES?

IN connexion with the recent appearance of cholera at Lucknow, it is reported that the disease, with all its pronounced symptoms as they affect the human subject, has attacked the horses of the 19th Bengal Cavalry, and that a cholera camp has been established for these unfortunate equine patients. We shall be much interested in learning further details as to the truth of this report, as it is a new feature in the history of cholera for it to manifest its symptoms in horses and the lower animals. If we remember aright, Dr. Cunningham, in his recent Report on Cholera in the North-Western Provinces of India, makes some allusion to the subject.

Mr. T. B. Ambler.—It is, for obvious reasons, contrary to our practice to nominate individuals.

Dr. Ashburton Thompson's paper shall be commenced very soon.

SKIM-MILK TREATMENT OF DIABETES.—CONGELATION AS A LOCAL ANÆSTHETIC.

To the Editor of THE LANCET.

SIR,—The May numbers of THE LANCET, which I have recently received, contain some correspondence on Dr. Donkin's treatment of diabetes by skim-milk. About two years ago I had an opportunity of testing this treatment, but was prevented from sending you an account of the case from feeling certain that numbers of a similar character would appear in your columns, and that a solitary one from this *ultima Thule* would scarcely be worthy of notice. I have been greatly astonished, however, on opening each successive packet of LANCETS, to find that a treatment so auspiciously ushered into notice had received apparently but little, if any, attention from the profession. My own experience, although confined to a single instance, leaves me in no doubt as to the value of skim-milk in some cases; but I am well aware that numerous experiments must be compared and considered before the exact value of the treatment can be determined. As a very small contribution to the subject, I may perhaps be allowed to offer the case already alluded to, and, as results alone are of interest, I shall omit many details.

A. B——, aged fifty-six, was a man of vigorous frame, good constitution, and temperate habits; had suffered on several occasions from slight attacks of a gouty character, but otherwise enjoyed good general health. I was asked to visit him for a passing attack of facial paralysis, the result of exposure to a stream of cold air. During my visit I detected several symptoms which indicated that for some time past the patient had been suffering from diabetes, and a subsequent examination of the urine established the fact. He stated he had for months been gradually losing flesh and strength; but as he had experienced no pain he had put off from time to time applying for advice. His feebleness was now so extreme that he was obliged to give up to a great extent walking exercise. The muscles were flaccid and shrunken, hanging, as it were, about the limbs. Mental effort of any kind was most irksome, and he complained of incessant drowsiness, with great depression of spirits. Continued thirst, with a great craving for drinks of an effervescent character, was present. He passed large quantities of pale straw-coloured urine, and a peculiar sweet, faint, urinous smell pervaded his bed-room. Having made out his case, I fully explained it to him, and, as he was a man of decided ability and force of character, I placed THE LANCET with Dr. Donkin's recorded cases in his hands, and requested him to treat himself according to the directions. He at once said it was impossible he could do so, as skim-milk had always had upon him the effect of a purgative. I then advised him to add to each dose of the milk from one-sixth to one-fourth part of lime-water. He did so, and the milk henceforth, when thus guarded, agreed admirably. To avoid the details of a lengthy letter, I may at once state that recovery commenced after the second day of this treatment, and went on continuously for two months, when he felt so well that he ceased to consider himself a patient. About the tenth day of the treatment he felt so much better that he committed an indiscretion in diet, when a great increase in the quantity of sugar was immediately detected in the urine. He at once fell back on the purely milk diet, and adhered to it for about six weeks, after which time he gradually resumed his usual regimen, and eventually regained all his former vigour of mind and body. The urine had now also acquired its normal condition. During his convalescence he frequently expressed his extreme satisfaction at the comfort he experienced from the treatment, also his astonishment at gaining flesh and strength on milk alone, and his gratification on finding himself more and more fit for the somewhat arduous duties incidental to his public life and private business.

May I be allowed to take this opportunity of briefly adverting to another subject, although it has no connexion with the foregoing?

In THE LANCET of Sept. 20th, 1870, p. 455, a letter appears which I addressed to you on the subject of local anæsthesia by congelation. The details are there given of a case in which, in presence of several professional friends, I performed amputation at the middle of the forearm, with little or no pain to the patient or shock to his system, local anæsthesia having (for reasons given) been produced by the freezing process as recommended by Dr. Arnott. The result as reported was so very satisfactory that I thought it probable the subject would have been further investigated by others who had facilities for doing so. I now bring it forward again in the hope it may yet excite attention. I feel assured that the freezing process by ice and salt has, in the vast majority of cases, a marked advantage over the ether spray. In many of the minor operations of surgery its complete immunity from danger should also give it a decided preference to chloroform. In warfare (not to mention other circumstances), during the exploration or treatment of many wounds after the inflammatory and painful stage has set in, the application of a local anæsthetic would seem to be clearly indicated, especially if exhaustion from previous hæmorrhage were present, or if the time necessary for the exhibition of chloroform could not be spared. I do not wish, however, to tax your space by any further remarks, and will only to some extent repeat what I formerly said, that the freezing mixture is a more ready and less painful application than the ether spray. Its action, too, is more prompt, swift, and certain, and has not to depend upon the purity of a chemical compound, or the proper action of an instrument. I therefore still think I was warranted in saying that this potent agent, since its introduction to the notice of the profession by Dr. Arnott, "has scarcely received that degree of attention which is due to its deserts."

I remain, Sir, very truly yours,

J. W. AGNEW, M.D., M.R.C.S. Eng.

Hobart Town, Tasmania, Sept. 6th, 1873.

VACCINATION.

OUR correspondent from Whittlesea does not seem to be aware that we quoted the words of the Vaccination Act, 1867, upon which the phraseology of the notice he sends us is founded, in THE LANCET of Dec. 13th, p. 865. He will find the provision as to the two miles distance in the regulations issued by the Privy Council, under the Vaccination Act, 1867. Our correspondent is a public vaccinator; and while he had an award for good vaccination in 1870, he did not get one in 1872, although believing, on the word of the vaccination inspector, that his work was then also good. Is not our correspondent doing an injustice to himself from want of a sufficient familiarity with the instructions and regulations under which he acts? We throw out this suggestion, finding that he derived his knowledge of the two miles distance regulation from the vaccination inspector, not from the regulations themselves, and that he does not seem to be aware of the conditions under which half-yearly vaccinations are advised by the Government.

Dr. Deane has addressed to us another letter, from which it is simply necessary to quote the following sentence:—"The modern law does not aim at improving the operation of vaccination. It can do, and does, much good by making the operation compulsory." We can imagine the astonishment with which such an asseveration will be read by those who are responsible for the law and its working.

R. M.—Avoid quacks, and consult some respectable practitioner. We do not prescribe.

MEDICAL RELIEF.

To the Editor of THE LANCET.

SIR,—In your impression of to-day I see a paragraph relating to orders for relief given by Poor-law medical officers to paupers.

I have been engaged as assistant and *locum tenens* in four union practices, and as deputy for one medical officer who does not reside in his district. My experience is that these "orders" are shamefully abused, and given freely to encourage patients to obtain midwifery orders. That is undeniable. At the same time numbers of patients apply for "quassia and water" when accompanied by an "order," who stay away directly the order is discontinued. These orders are a fertile source of grumbling. One patient "does not see why he should not have an order as well as his neighbour." These orders are not unfrequently used to "quiet" patients who are disposed to complain to the Board.

When I first took charge of my district as deputy (two years ago), orders were given at the rate of forty per month, about six of which were for wine or spirits. Now I order *nothing* but cod-liver oil, and there has not been one-half the dissatisfaction which there used to be. Some time ago the Board wrote to their medical officers, asking the reason of the large number of orders given by them. The replies were various; but most of them stated that they only ordered wine or spirits when "absolutely necessary." One of them, however, stated that *he never* ordered wine or spirits; therefore they cannot be "absolutely necessary." There are now, therefore, two districts in this union, in which for a long time *no wine or spirits* have been ordered under any circumstances, and one in which *nothing* but cod-liver oil is ordered (of course in suitable cases). My own opinion is that relief should come from the relieving officer; medical attendance from the medical officer; medicine to be supplied by the Board. The medical officer would not then be tempted to procure midwifery orders by bribes at the expense of the ratepayers, and the poor would have a chance of getting something better than quassia. Removal to infirmary or workhouse is preferable to out-door relief, as the patient rarely gets but a part of what is ordered out-doors.

Yours faithfully,

December 20th, 1873. ANTI-HUMBUG.

*** We like to give all sides a hearing; but we do not like to publish this letter without expressing our disagreement with the author as to the motives which actuate medical men in giving orders for relief.—ED. L.

M. J. P., (Wandsworth.)—Yes; the Faroe Islands, with much to recommend them as a resort for the phthisical, are in a very unhealthy state, fever being quite epidemic among the inhabitants. The week before last as many as 300 cases existed at Thorshaven alone, but up to that time only 8 or 9 deaths had occurred. "Placed far amid the melancholy main," these islands cannot fail to arouse the active sympathy not only of the Danish Government, but of all who hear of their deplorable condition.

Dr. Trevor Morris, (Combe.)—We are not aware that there is a work of the kind devoted to the affections of old age.

Red-jacket.—Our correspondent, we think, need not fear anything of the kind.

WOMEN DOCTORS.

To the Editor of THE LANCET.

SIR,—I have just seen in THE LANCET the letter of a medical gentleman, of London, in answer to one of mine which appeared in your journal of the 22nd ult., on the doings of the female medical students at Zurich.

A very short reply is all I mean to make. I will not enter into a controversy about the conduct of the female students at Zurich, nor contrast their behaviour with that of men. I am well aware that, as regards individuals and classes of people whose conduct is impugned, there is nothing easier than to procure whitewashing testimonials. That of Professor Hermann testifying to their good behaviour, "without exception," is too much in the face of the action of the Emperor of Russia, and of the notice given to the subject by the correspondent in Zurich of the *Pall Mall Gazette*. It was not a question of "industry and energy," but of moral conduct. It will scarcely do to pretend not to understand what the Emperor of Russia wants, or to assert that it was a political demonstration on his part. The "women students" were ordered to return to their homes in consequence of their bad conduct, and after that the correspondent who investigated the subject on the spot, and reported the result to the *Pall Mall Gazette*, can scarcely be accused of hasty assertions.

Your obedient servant,

Kingussie, Dec. 30th, 1873. J. C. OUCHARD, M.R.C.S. Ed.

THE WEST DORSET MEDICAL ASSOCIATION.

OUR readers may remember that some time ago we condemned the conduct of the coroner and jury in certain inquests at Bridport for reflecting on the conduct of medical men without affording them any opportunity of explaining and defending such conduct. We note, with very great satisfaction, that a protest against such treatment of medical men has been well signed by the West Dorset Medical Association, and is published in the *Bridport News*. If medical men would thus stand by each other, the public and public bodies would think twice before saying anything disparaging of us. The Dorset Association sets a noble example to the profession.

Mr. William Billington, (Stockport.)—The edition of Aretæus in question, though of no philological value (being irrevocably superseded by the more recent recensions of Ermerins and the late Dr. Francis Adams, of Banchory, N.B.), is, as the *editio princeps*, a curiosity, and would be particularly prized by such a University as that of Edinburgh, where the study of the Greek medical writers is still encouraged.

Cocinnus.—A short-beaked sound with a cylindrical handle, made by Weiss.

SUBCUTANEOUS INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—In your issues of Nov. 29th and Dec. 6th, both your correspondents use a solution of morphia dissolved by means of acid: in one, acetic; in the other, hydrochloric. For many years, both in hospital and private practice, I have used the following:—Muriate of morphia, two grains; hot water, one drachm: this amount of morphia being about the quantity that the warm water will take up or dissolve without leaving a deposit after cooling. In this there is *not the slightest* pain experienced after injecting it under the skin, which I have always found more or less after the solutions made up with the acids; and afterwards, in tolerably healthy people, there is no irritation or inflammation of the part. In this solution a quarter of a grain of morphia is contained in seven and a half minims. I am sure if a trial is given to this, it will be found far superior to the solutions made up with any of the acids. I am, Sir, your obedient servant,

Glencoe, December, 1873. WM. L. WHITE, M.B.

To the Editor of THE LANCET.

SIR,—During a residence of some years in the Liverpool Royal Infirmary I administered morphia hypodermically about six thousand times, on a rough calculation. The solution I employed usually contained one grain of the hydrochlorate of morphia to the drachm of water, with a little hydrochloric acid and alcohol. I never observed any inconvenience but once, when a very small abscess formed. I have frequently used the ordinary solution of the Pharmacopœia, and have never found any difficulty from the bulk of the fluid used.

Your correspondent, Mr. White, in THE LANCET of Dec. 20th, seems to think that a syringe to hold the necessary quantity is not obtainable. A syringe to hold two drachms is at least as easy to make as one to hold thirty minims, and I know from experience that the larger one is less liable to get out of order than the smaller. The time required with the ordinary piston syringe is only a few seconds.

I cannot agree with the use of the very strong solutions advocated by some, for three reasons:—1st. A mistake, if made, is of considerable importance. 2nd. The very small instruments, as a rule, do not act perfectly, and a minim or two remains in the syringe—a matter of some moment when a solution of one in eight, as advocated by Mr. White, is used. 3rd. The morphia in strong solutions crystallises in the tube of the needle, unless great care be taken. Yours truly,

Tue Brook, Dec. 22nd, 1873. HENRY Y. PITTS, L.R.C.P. Lond.

To the Editor of THE LANCET.

SIR,—Would Mr. White, whose letter referring to the subcutaneous injection of morphia appeared in your impression of the 20th instant, be good enough to state whether he ever used the hydrochlorate of morphia in place of the acetate, since I, not having by me any of the latter, attempted to make with the former a solution for subcutaneous injection, using the same proportions as he stated. The result of my attempt was a clear liquid whilst hot; but on cooling, it became converted into a snow-white, flocculent, semi-solid substance, resembling damp morphia. I then tried Mr. Mackenzie's proportions (water to *four* drachms), with the like want of success. In this case also I used the hydrochlorate. Do Messrs. White and Mackenzie use the acid. acet. fort., dil., or glaciale? I tried first the dilute, and then the strong hydrochloric acid. I am, Sir, yours truly,

December 29th, 1873. MORPHIA.

Pro Bono Publico.—Pettenkofer's little work on Air in relation to Clothing, Dwelling, and Soil, published by Trübner. Medical men in this country are, as a rule, rather deficient in knowledge of the progress of science in Germany, and Pettenkofer's manual should be welcome. Although in the form of popular lectures, it is in reality a profound treatise on some of the most vital questions of hygiene, and the medical man who masters it will have become a sound hygienist. Engineers remember how Stephenson proposed to regard the rails and the locomotive which moved over them as constituting integral parts of one piece of machinery, and hygienists will not fail to profit in like manner by Pettenkofer's suggestion that the walls of our houses constitute a portion of our clothing. Among other practical questions, Pettenkofer deals with ventilation without draught.

The Secretary, (City of London and East London Dispensary.)—We would suggest the lay papers as the medium of our correspondent's communication.

REMOVAL OF LARGE CALCULI THROUGH THE URETHRA.

To the Editor of THE LANCET.

SIR,—Can any of your readers inform me as to the largest-sized calculi removed from the urethra without incision? A patient of mine was suffering greatly from two smooth calculi impacted in his urethra, within a little more than an inch from its external orifice. Each of them weighed eleven and a half grains, and measured one and a half inches at the greatest circumference, and one and a quarter at the smallest. They were removed without incision by a small polypus forceps.—Yours, &c.,

December 22nd, 1873. CALCULUS.

M. J. A. GALIGNANI.

THE loss which has been sustained by the death of M. J. A. Galignani ought not to be passed over in silence. This gentleman was the elder of two brothers, who by their enterprise and talent raised *Galignani* to its prosperous position among journals. The deceased was a man of great benevolence; he founded the hospital near Paris bearing his name, for the reception specially of poor English subjects, and, conjointly with his brother, defrayed the expense of building the hospital of Corbeil, in the vicinity of their residence. M. Galignani was 77 years of age at his death.

Mr. Harry Carden, (Hanley.)—Apply to the Army Medical authorities, 6, Whitehall-yard, S.W., for the information. We cannot recall the names of the works alluded to.

THE request of ***Dr. Dawson Turner*** shall have our attention.

POISONOUS SYMPTOMS FROM THE USE OF THE ACID PERNITRATE OF MERCURY.

To the Editor of THE LANCET.

SIR,—We all know well, but are apt in practice to forget, that we may have constitutional symptoms from the local use of the above-named agent.

In the present case, one of lupus of the cheek, in which the tubercles were red and soft, but not ulcerating, the caustic was applied over a space certainly not larger than a florin. The pain caused was excessively acute, and the patient had to take a glass of neat brandy. For about ten hours all went well, when on a sudden profuse vomiting of yellowish matter, and griping and purging, the motions being streaked with blood, came on. There were also cold sweats, with a sense of constriction about the pharynx. The pulse was small, and only 56. The vomiting, which was increased even by ice, came on every five or ten minutes for three hours. After this there was a tendency to sleep, interrupted by fitful starts, and occasionally complaints of cramp in the legs. About six hours after the commencement of the symptoms they gradually diminished in severity. Twenty-four hours after the application of the caustic the patient said "he felt himself again," except for occasional pains in his abdomen. He felt, however, so weak that he could scarcely stand. I should mention that he was a strong healthy man, in the prime of life, and, although taking quite a harmless mixture at the time, had been well seasoned both with arsenic and mercury for about eight months past, and never felt any ill-effects from either.

I presume the above case teaches us that we must no longer trust in the dictum usually received—viz., "that we may safely apply the caustic over a space not larger than half-a-crown." Yours truly,

Manchester, December, 1873. H. STANLEY GALE.

Cholera.—Our correspondent had better refer to the work itself. The statements are put forward, of course, on the responsibility of the author. No method for the disinfection of cattle coming from an infected district has ever been adopted, and there is no record, as far as we are aware, of cholera having been communicated through the medium of cattle.

Mr. R. G. Bennett (Bermondsey) must consult some physician, as we cannot undertake to give advice in the matter.

Dr. Carr is thanked.

Mr. C. Turner, (Dorking.)—Our correspondent's suggestions have been under consideration for some time.

ANALYSTS AND TEA SAMPLES.

To the Editor of THE LANCET.

SIR,—Kindly allow me space to correct an error relating to the tea supplied to the Woolwich guardians.

The samples of tea examined by Dr. Tidy, and certified as genuine, was not a part of, or even from, the same chest as either of the samples examined by me, one of which I found genuine, and one adulterated. Dr. Tidy's sample was taken by Messrs. Densham and Sons, as stated in their published letters, from tea in bond at the latter part of November. My samples were received from the inspector on the 7th November, and are stated to have been in the workhouse on that date. The conflict of testimony is, therefore, merely apparent, and not real.

I am, Sir, yours faithfully,

G. W. WIGNER,
Public Analyst for Greenwich, Plumstead, and Woolwich Districts.

Great Tower-street, E.C., Jan. 1st, 1874.

An Intending F.R.C.S. Student.—1. Heath's Practical Anatomy; Kirkes's Physiology; Erichsen's Surgery, and several of the articles in Holmes's System; Billroth's Surgical Pathology, or Green's Manual of Pathological Anatomy.—2. Consult Mr. Marson's article "Small-pox" in Reynolds's System of Medicine.

Justitia.—The fee should be divided in such a case. If a gentleman undertakes midwifery at a distance of seven miles, he should be prepared to divide fees with any medical brother who fills a gap for him.

Dr. F. Dawson, (Dartmouth.)—Thanks; but we have not the space for its insertion.

PAUPER LUNATICS IN WORKHOUSES.

To the Editor of THE LANCET.

SIR,—The paragraph on which the annotation published in THE LANCET of December 20th, with the above heading, was based, found its way to you anonymously, without either my knowledge or authority. It is correct that I had had a correspondence with the Board of Guardians of the Guildford Union relative to a demented pauper sent back from the Brookwood Asylum to the workhouse, the result being that I was placed in a very unenviable dilemma, but which I solved by recertifying the man, and returning him to Brookwood, where he now remains in charge. I made no complaint against either Dr. Brushfield or any official at Brookwood, although I did feel that I had a ground of complaint against the guardians; but as the correspondence was simply a matter of official communication between myself as their medical officer, and them as a Board, and was, moreover, never intended to be given to the public, I regret that anyone should have thought it necessary to send you the newspaper report in question.—Yours, &c.,

Guildford, December 29th, 1873. RICH. EAGER.

REVACCINATION OR SMALL-POX.

J. R.—There can be no doubt that revaccination is the lesser evil. In the cases mentioned, doubtless, the small-pox, which has a period of incubation of twelve days, entered the system previous to vaccination, which, according to Marson, must be so advanced as to have an areola round it in order to avert small-pox. The experience of the Small-pox Hospitals is decisive in showing that successful revaccination affords an almost perfect security against small-pox. Revaccination need not be repeated; but it should be done well if it is to be relied on. When small-pox enters a family, the healthy members should be revaccinated, unless there is some special reason to the contrary.

X. Y. Z. must apply to the Secretary of the institution.

M. A.—The appointments to which our correspondent refers are in the gift of the President of the Local Government Board, and all applications should be made direct to him. We are unable to give the further details our correspondent asks for. They will best be ascertained by inquiry at Whitehall.

GUY'S HOSPITAL.

MR. BLANCHARD JERROLD, in his narrative of "*The* Thomas Walkers" in the *Gentleman's Magazine* for the current month, quotes the following, which he correctly describes as the key-note to Mr. Walker's treatise "On Pauperism":—

"I think I cannot better illustrate the effects of the Poor Laws than by the following anecdote, which I once heard from a gentleman connected with Guy's Hospital. The founder left to the trustees a fund to be distributed to such of his relatives as should from time to time fall into distress. The fund at length became insufficient to meet the applications, and the trustees, thinking it hard to refuse any claimants, had recourse to the funds of the hospital; the consequence of which was, as my informant stated, that as long as the practice lasted, *no Guy was ever known to prosper*. So that if any individual could be wicked enough to wish the ruin of his posterity for ever, his surest means would be to leave his property in trust to be distributed to them only when in distress. Just so it has been with the legal provision for the poor in England. With slight variations, the fund required has, from its institution, been continually increasing, and the progress of moral improvement has in consequence been greatly retarded."

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Wm. Jenner, London; Sir D. Corrigan, Dublin; Sir H. Thompson, London; Dr. Barnes, London; Dr. Beale, London; Dr. Tilbury Fox, London; Dr. T. Browne, Devonport; Dr. Ralfe, London; Dr. Blake Maurice; Dr. Phillips, London; Mr. C. Webber, London; Dr. Dawson; Dr. Woodman, London; Dr. Carr, London; Dr. Woodward, Worcester; Mr. Mason; Dr. Fleming, Holbrook; Mr. Harrison, Walsall; Mr. Lorimer, Plymouth; Mr. Manning, Sydney; Dr. Kay, London; Dr. Fleming, St. Vincent; Dr. Sutherland, Castletown; Mr. Calvert, Beverley; Mr. Newling, Emsworth; Mr. Brown, Warrington; Dr. Lowndes, Liverpool; Mr. F. Evershed, Bega, N.S.W.; Mr. Orchard, Kingussie; Mr. Hooker, London; Mr. G. Fisher, Glossop; Mr. R. Myers, Chatham; Mr. Jones, Corwen; Mr. Carden, Hanley; Dr. Rosser, Croydon; Mr. J. A. Thompson, London; Mr. Rooke, Barnsley; Mr. J. A. Wanklyn, London; Mr. Ker, Cradley Heath; Mr. Bennett, London; Dr. M'Donald, Southall; Mr. Carr, Dumfries; Mr. Archer, Victoria; Dr. Satchell, Kew; Mr. Steward, Biggleswade; Mr. Lloyd, Honiton; Mr. W. Williams, Blackburn; Mr. Wood, Carlisle; Mr. Ryley, Greenford; Mr. Stannard, Liverpool; Mr. Waller, Darlington; Mr. Lawrence, Oldham; Dr. King, Camelford; Dr. Black, Glasgow; Mr. Richardson, Brighton; Mr. Page, Sunderland; Mr. Badham, Tewkesbury; Mr. Kellgreen, Gotha; Mr. F. G. Brown, London; Dr. Webster, Golcar; Mr. Greensill, London; Dr. Donkin, London; Mr. Rose, High Wycombe; Mr. Edmiston, London; Mr. Hamilton, Birkenhead; Dr. Walker, Bootle; Dr. Alexander, Newfoundland; Dr. Browne, Dublin; Dr. Provis, Bath; Rev. West Welwyn; Dr. Snow Beck, London; Mr. Bond, Gloucester; Dr. Tomkins, Leamington; Mr. Ambler, London; Dr. Hall, Sheffield; Mr. J. Richards, Ashton; Mr. W. Hawker, Woodford; Mr. Murch, London; Mr. Reeves, London; Mr. R. Mackeston, Newport; Dr. Atthill, Waterbeck; Mr. Colton, Oxford; Mr. T. Spence, Maidstone; Mr. Sands, New York; Mr. Humphrys, Boston, U.S.; Dr. Ogston, Aberdeen; Dr. Campbell, Liverpool; Mr. W. Rae, Swansea; Dr. Churchward, Anerley; Mr. Howell, Birmingham; Mr. Hall, Chelmsford; Mr. Hughes, Hornchurch; Mr. Longwood; Mr. E. Lamond, Fordingbridge; Mr. Pitts, Tue Brook; Dr. Shaw, Leavesden; Mr. Barrett, Hong-Kong; Mr. George, Balcombe; Mr. Smith, London; Dr. Hingston, Plymouth; Mr. M'Chute, Bristol; Mr. Fowke, Stafford; Mr. Macnaughton, Inveraray; Dr. Smith, Clifton; Mr. Tobin, Leeds; Mr. A. Moore, Leyton; Mr. White, Glenece; Mr. C. A. Etches, Helperby; Mr. Baron, Ulceby; Mr. Nicholls, Stamford; Dr. Gowan, Powick; Mr. Eastwood, Darlington; Mr. Barnes, Dublin; Mr. Watson, London; Mr. Hogg, Pendlebury; Mr. Atherton, London; Dr. Hewson, Coton Hill; Dr. Barnes, Guildford; Mr. Cocker, Lewisham; Mr. Sprague, Kimbolton; Dr. Sargeant, Warboys; Dr. Cleed, Greenwich; Dr. Munro, Nettlebed; Mr. Weir, Batcroft; Mr. Miller, Birmingham; Mr. Tiechurst, Bishops Waltham; Mr. Gosling, Congleton; Mr. Walker, Newton Heath; Mr. Walter, Walsall; Mr. Maguire, Formby; Mr. Bruce, Kensington; Mr. Willmore, Stockbridge; Mr. Dixie, Lincoln; Mr. Kent, Beeralston; Mr. Wickershaw, Piacenza; Dr. Grant, Longton; Mr. Burge, Shepherd's Bush; Dr. Robinson, Dorchester; Mr. Lomax, London; R. E. J.; Outsider; Morphia; Weasel; Enquirer; M.R.C.S.; Studens; A Sufferer; Ignoramus; Rex; Epilepsy; Number One; A Subscriber; V. A.; R. M.; Calculus; R. S.; Medicus; L. M. J.; &c. &c.

Colonial Standard, Queensland Times, Ipswich Observer, Sunderland Times, Falmouth Post (Jamaica), *Daily News, Edinburgh Courant, Western Gazette*, and *Glasgow News* have been received.

Medical Diary of the Week.

Monday, Jan. 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations on the Eye, 1½ P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Lettsomian Lectures: Dr. Broadbent, "On Syphilitic Affections of the Nervous System." Lecture I.: Syphilis as a Cause of Disease in the Nervous System.

Tuesday, Jan. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL INSTITUTION. — Prof. Tyndall, "On the Motion and Sensation of Sound." (Juvenile Lectures.)
PATHOLOGICAL SOCIETY OF LONDON.—8 P.M. Annual Meeting for the Election of Officers, Report, &c.—The following Preparations will also be exhibited: Cast of an Enchondroma; Pendulous Tumour from the Pubes of a Man; Mitral Stenosis; Syphilitic Phthisis; Specimens of the Grouse Disease; Recurrent Sarcoma of the Thigh; Muscles from a Case of Trichiniasis; Cancer of the Breast; Hydatids of the Liver, Omentum, and Recto-Vaginal Pouch; Jaundice; Xanthelasma Multiplex; Mediastinal Tumour; &c. &c.

Wednesday, Jan. 7.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
OBSTETRICAL SOCIETY OF LONDON. — 7 P.M. Annual Meeting: Election of Officers; President's Address. — Dr. A. W. Edis, "On the Necessity for Caution in the Employment of Intra-Uterine Stems."—Dr. W. S. Playfair, "On Puerperal Thrombosis."—Dr. J. J. Phillips, "On a rare form of Uterine Lesion during Pregnancy."
ROYAL MICROSCOPICAL SOCIETY. — 8 P.M. Mr. Alfred Sanders: "Further Notes on the Zoospores of Crustacea, &c."

Thursday, Jan. 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION. — Prof. Tyndall, "On the Motion and Sensation f Sound." (Juvenile Lectures.)
HARVEIAN SOCIETY OF LONDON. — 8 P.M. Annual Meeting: Election of Officers and Council for 1874; Reading of the Council's Annual Report; The President's Address.—Casual Communications.
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting. — 8 P.M. General Meeting. —Mr. Hutchinson: "When and how should Mercury be used for the Cure of Syphilis."

Friday, Jan. 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON. — 8½ P.M. Dr. Douglas Powell, "On some Cases illustrating the Rheumatic Origin of Aneurism of the Aorta."—Dr. Cayley, "On a Case of Hæmoptysis." — Mr. Brudenell Carter will show a Patient cured of Sarcoma of the Orbit by Extirpation and Cautery.

Saturday, Jan. 10.

HOSPITAL FOR WOMEN Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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